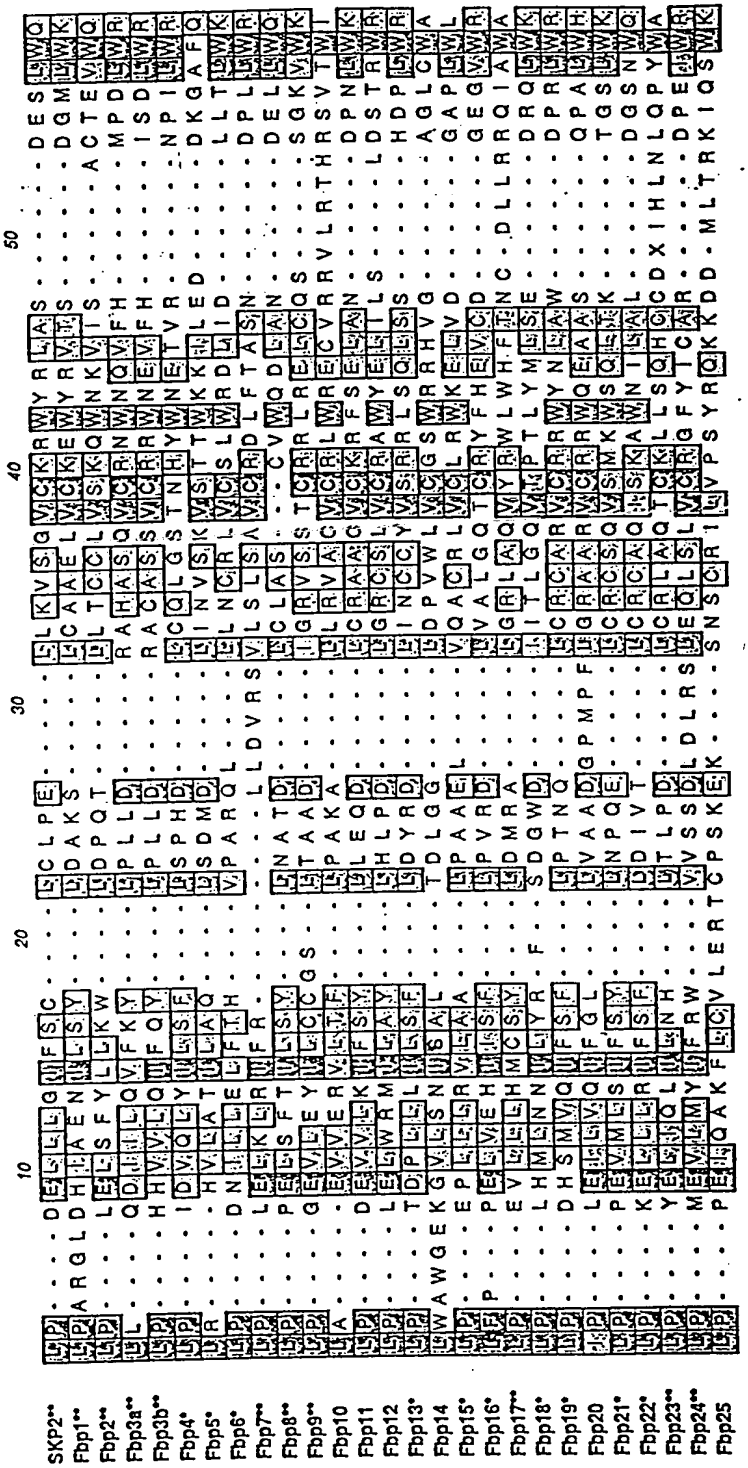

FIG. 1

20704-0.74204

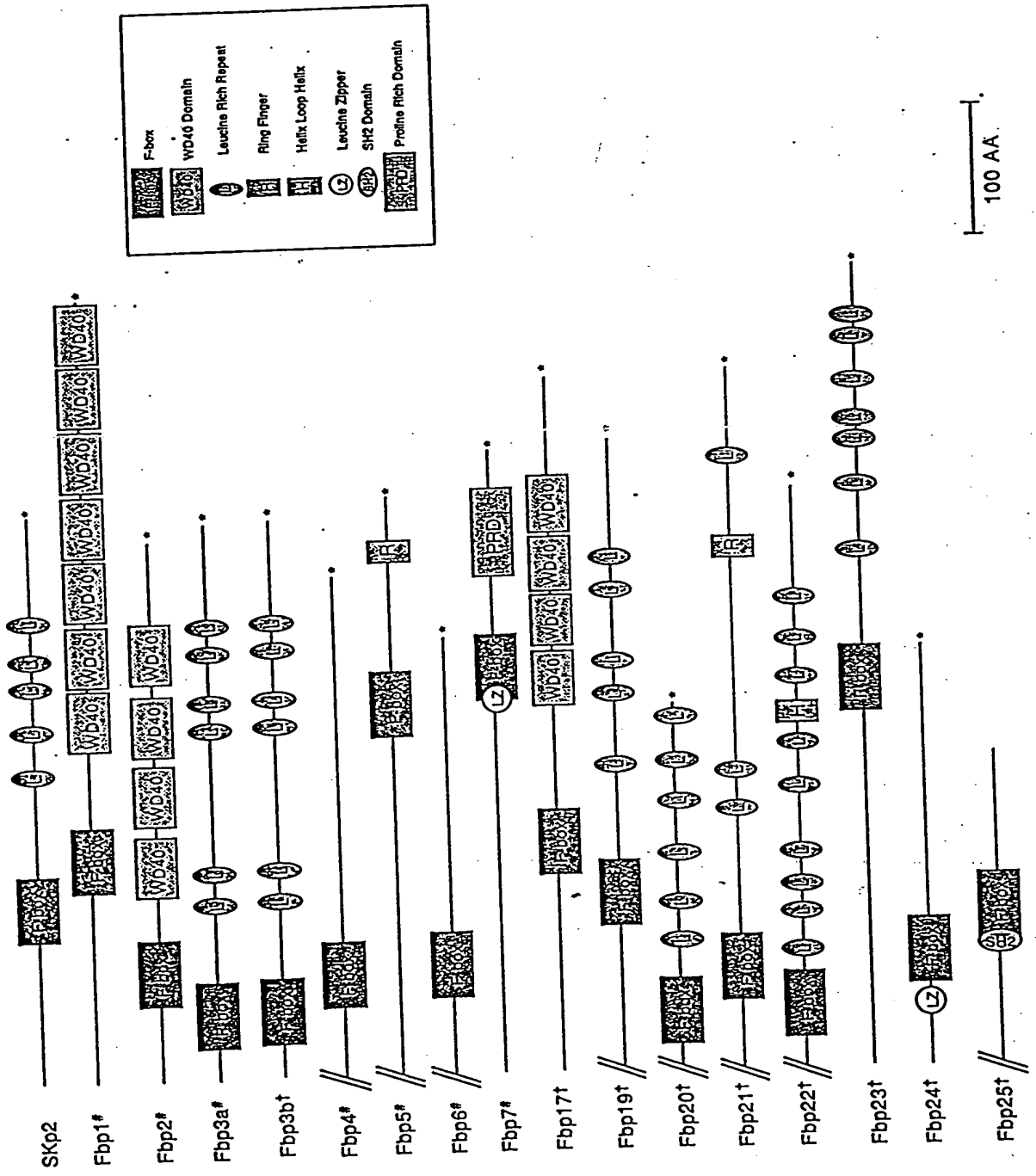
F-box
WD40 Domain
Leucine Rich Repeat
Ring Finger
Helix Loop Helix
Leucine Zipper
SH2 Domain
Proline Rich Domain
100 AA
SKp2
Fbp1#
Fbp2#
Fbp3a#
Fbp3b†
Fbp4#
Fbp5#
Fbp6#
Fbp7#
Fbp17†
Fbp19†
Fbp20†
Fbp21†
Fbp22†
Fbp23†
Fbp24†
Fbp25†

FIG. 2

US 6,750,054 B2

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          10         20         30         40         50         60
MDPAEAVLQEKALKFMNSSEREDCNNGEPPRKIIPEKNSLRQTYNSCARLCLNQETVCLA

          70         80         90        100        110        120
STAMKTENCVAKTKLANGTSSMIVPKQRKLSASYEKEKELCVKYFEQWSESDQVEFVEHL

         130        140        150        160        170        180
ISQMCHYQHGHINSYLKPMLQRDFITALPARGLDHIAENILSYLDAKSLCAAELVCKEWY

         190        200        210        220        230        240
RVTSDGMLWKKLIERMVRTDSLWRGLAERRGWGQYLFKNKPPDGNAPPNSFYRALYPKII

         250        260        270        280        290        300
QDIETIESNWRCGRHSLQRIHCRSETSKGVYCLQYDDQKIVSGLRDNTIKIWDKNTLECK

         310        320        330        340        350        360
RILTGHTGSVLCLQYDERVIITGSSDSTVRVWDVNTGEMLNTLIHHCEAVLHLRFNNGMM

         370        380        390        400        410        420
VTCSKDRSIAVWDMASPTDITLRRVLVGHRAAVNVVDFDDKYIVSASGDRTIKVWNTSTC

         430        440        450        460        470        480
EFVRTLNGHKRGIACLQYRDRLVVSGSSDNTIRLWDIECGACLRVLEGHEELVRCIRFDN

         490        500        510        520        530        540
KRIVSGAYDGKIKVWDLVAALDPRAPAGTLCLRTLVEHSGRVFRLQFDEFQIVSSSHDDT

         550        560
ILIWDFLNDPAAQAEPPRSPSRTYTYISR
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FIG. 3A

EP 0 942 048 A2

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        10         20         30         40         50         60         70         80         90
TGCGTTGGCTGCGGCCTGGCACCAAAGGGGCGGCCCCGGCGGAGAGCGGACCCAGTGGCCTCGGCGATTATGGACCCGGCCGAGGCGGTGCTGC

    100        110        120        130        140        150        160        170        180
AAGAGAAGGCACTCAAGTTTATGAATTCCTCAGAGAGAGAAGACTGTAATAATGGCGAACCCCCTAGGAAGATAATACCAGAGAAGAATTCACT

190        200        210        220        230        240        250        260        270        280
TAGACAGACATACAACAGCTGTGCCAGACTCTGCTTAAACCAAGAAACAGTATGTTTAGCAAGCACTGCTATGAAGACTGAGAATTGTGTGGCC

      290        300        310        320        330        340        350        360        370
AAAACAAAACTTGCCAATGGCACTTCCAGTATGATTGTGCCCAAGCAACGGAAACTCTCAGCAAGCTATGAAAAGGAAAAGGAACTGTGTGTCA

 380        390        400        410        420        430        440        450        460        470
AATACTTTGAGCAGTGGTCAGAGTCAGATCAAGTGGAATTTGTGGAACATCTTATATCCCAAATGTGTCATTACCAACATGGGCACATAAACTC

        480        490        500        510        520        530        540        550        560
GTATCTTAAACCTATGTTGCAGAGAGATTTCATAACTGCTCTGCCAGCTCGGGGATTGGATCATATCGCTGAGAACATTCTGTCATACCTGGAT

    570        580        590        600        610        620        630        640        650
GCCAAATCACTATGTGCTGCTGAACTTGTGTGCAAGGAATGGTACCGAGTGACCTCTGATGGCATGCTGTGGAAGAAGCTTATCGAGAGAATGG

660        670        680        690        700        710        720        730        740        750
TCAGGACAGATTCTCTGTGGAGAGGCCTGGCAGAACGAAGAGGATGGGGACAGTATTTATTCAAAAACAAACCTCCTGACGGGAATGCTCCTCC

      760        770        780        790        800        810        820        830        840
CAACTCTTTTTATAGAGCACTTTATCCTAAAATTATACAAGACATTGAGACAATAGAATCTAATTGGAGATGTGGAAGACATAGTTTACAGAGA

  850        860        870        880        890        900        910        920        930        940
ATTCACTGCCGAAGTGAAACAAGCAAAGGAGTTTACTGTTTACAGTATGATGATCAGAAAATAGTAAGCGGCCTTCGAGACAACACAATCAAGA

        950        960        970        980        990       1000       1010       1020       1030
TCTGGGATAAAAACACATTGGAATGCAAGCGAATTCTCACAGGCCATACAGGTTCAGTCCTCTGTCTCCAGTATGATGAGAGAGTGATCATAAC

   1040       1050       1060       1070       1080       1090       1100       1110       1120
AGGATCATCGGATTCCACGGTCAGAGTGTGGGATGTAAATACAGGTGAAATGCTAAACACGTTGATTCACCATTGTGAAGCAGTTCTGCACTTG

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
CGTTTCAATAATGGCATGATGGTGACCTGCTCCAAAGATCGTTCCATTGCTGTATGGGATATGGCCTCCCCAACTGACATTACCCTCCGGAGGG

     1230       1240       1250       1260       1270       1280       1290       1300       1310
TGCTGGTCGGACACCGAGCTGCTGTCAATGTTGTAGACTTTGATGACAAGTACATTGTTTCTGCATCTGGGGATAGAACTATAAAGGTATGGAA

1320       1330       1340       1350       1360       1370       1380       1390       1400       1410
CACAAGTACTTGTGAATTTGTAAGGACCTTAAATGGACACAAACGAGGCATTGCCTGTTTGCAGTACAGGGACAGGCTGGTAGTGAGTGGCTCA

      1420       1430       1440       1450       1460       1470       1480       1490       1500
TCTGACAACACTATCAGATTATGGGACATAGAATGTGGTGCATGTTTACGAGTGTTAGAAGGCCATGAGGAATTGGTGCGTTGTATTCGATTTG

  1510       1520       1530       1540       1550       1560       1570       1580       1590
ATAACAAGAGGATAGTCAGTGGGGCCTATGATGGAAAAATTAAAGTGTGGGATCTTGTGGCTGCTTTGGACCCCCGTGCTCCTGCAGGGACACT

1600       1610       1620       1630       1640       1650       1660       1670       1680       1690
CTGTCTACGGACCCTTGTGGAGCATTCCGGAAGAGTTTTTCGACTACAGTTTGATGAATTCCAGATTGTCAGTAGTTCACATGATGACACAATC

     1700       1710       1720       1730       1740       1750       1760       1770       1780
CTCATCTGGGACTTCCTAAATGATCCAGCTGCCCAAGCTGAACCCCCCCCGTTCCCCTTCTCGAACATACACCTACATCTCCAGATAAATAACCA

1790       1800       1810       1820       1830       1840       1850       1860       1870       1880
TACACTGACCTCATACTTGCCCAGGACCCATTAAAGTTGCGGTATTTAACGTATCTGCCAATACCAGGATGAGCAACAACAGTAACAATCAAAC

      1890       1900       1910       1920       1930       1940       1950       1960       1970
TACTGCCCAGTTTCCCTGGACTAGCCGAGGAGCAGGGCTTTGAGACTCCTGTTGGGACACAGTTGGTCTGCAGTCGGCCCAGGACGGTCTACTC

  1980       1990       2000       2010       2020       2030       2040       2050       2060
AGCACAACTGACTGCTTCAGTGCTGCTATCAGAAGATGTCTTCTATCAATTGTGAATGATTGGAACTTTTAAACCTCCCCTCCTCTCCTCCTTT

2070       2080       2090       2100       2110       2120       2130       2140       2150
CACCTCTGCACCTAGTTTTTTCCCATTGGTTCCAGACAAAGGTGACTTATAAATATATTTAGTGTTTTGCCAGAAAAAAAAAA
```

FIG. 3B

US 6,750,324 B2 - 06/15/2004

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        10         20         30         40         50         60
MERKDFETWLDNISVTFLSLTDLQKNETLDHLISLSGAVQLRHLSNNLETLLKRDFLKLL

        70         80         90        100        110        120
PLELSFYLLKWLDPQTLLTCCLVSKQWNKVISACTEVWQTACKNLGWQIDDSVQDALHWK

       130        140        150        160        170        180
KVYLKAILRMKQLEDHEAFETSSLIGHSARVYALYYKDGLLCTGSDDLSAKLWDVSTGQC

       190        200        210        220        230        240
VYGIQTHTCAAVKFDEQKLVTGSFDNTVACWEWSSGARTQHFRGHTGAVFSVDYNDELDI

       250        260        270        280        290        300
LVSGSADFTVKVWALSAGTCLNTLTGHTEWVTKVVLQKCKVKSLLHSPGDYILLSADKYE

       310        320        330        340        350        360
IKIWPIGREINCKCLKTLSVSEDRSICLQPRLHFDGKYIVCSSALGLYQWDFASYDILRV

       370        380        390        400        410        420
IKTPEIANLALLGFGDIFALLFDNRYLYIMDLRTESLISRWPLPEYRESKRGSSFLAGEH

PG
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FIG. 4A

Express Mail No. EV 282 142 905 US

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        10         20         30         40         50         60         70         80         90
ATGGAGAGAAAGGACTTTGAGACATGGCTTGATAACATTTCTGTTACATTTCTTTCTCTGACGGACTTGCAGAAAAATGAAACTCTGGATCACC

    100        110        120        130        140        150        160        170        180
TGATTAGTCTGAGTGGGGCAGTCCAGCTCAGGCATCTCTCCAATAACCTAGAGACTCTCCTCAAGCGGGACTTCCTCAAACTCCTTCCCCTGGA

190        200        210        220        230        240        250        260        270        280
GCTCAGTTTTTATTTGTTAAAATGGCTCGATCCTCAGACTTTACTCACATGCTGCCTCGTCTCTAAACAGTGGAATAAGGTGATAAGTGCCTGT

      290        300        310        320        330        340        350        360        370
ACAGAGGTGTGGCAGACTGCATGTAAAAATTTGGGCTGGCAGATAGATGATTCTGTTCAGGACGCTTTGCACTGGAAGAAGGTTTATTTGAAGG

 380        390        400        410        420        430        440        450        460        470
CTATTTTGAGAATGAAGCAACTGGAGGACCATGAAGCCTTTGAAACCTCGTCATTAATTGGACACAGTGCCAGAGTGTATGCACTTTACTACAA

         480        490        500        510        520        530        540        550        560
AGATGGACTTCTCTGTACAGGGTCAGATGACTTGTCTGCAAAGCTGTGGGATGTGAGCACAGGGCAGTGCGTTTATGGCATCCAGACCCACACT

    570        580        590        600        610        620        630        640        650
TGTGCAGCGGTGAAGTTTGATGAACAGAAGCTTGTGACAGGCTCCTTTGACAACACTGTGGCTTGCTGGGAATGGAGTTCCGGAGCCAGGACCC

660        670        680        690        700        710        720        730        740        750
AGCACTTTCGGGGGCACACGGGGGCGGTATTTAGCGTGGACTACAATGATGAACTGGATATCTTGGTGAGCGGCTCTGCAGACTTCACTGTGAA

      760        770        780        790        800        810        820        830        840
AGTATGGGCTTTATCTGCTGGGACATGCCTGAACACACTCACCGGGCACACGGAATGGGTCACCAAGGTAGTTTTGCAGAAGTGCAAAGTCAAG

 850        860        870        880        890        900        910        920        930        940
TCTCTCTTGCACAGTCCTGGAGACTACATCCTCTTAAGTGCAGACAAATATGAGATTAAGATTTGGCCAATTGGGAGAGAAATCAACTGTAAGT

         950        960        970        980        990       1000       1010       1020       1030
GCTTAAAGACATTGTCTGTCTCTGAGGATAGAAGTATCTGCCTGCAGCCAAGACTTCATTTTGATGGCAAATACATTGTCTGTAGTTCAGCACT

    1040       1050       1060       1070       1080       1090       1100       1110       1120
TGGTCTCTACCAGTGGGACTTTGCCAGTTATGATATTCTCAGGGTCATCAAGACTCCTGAGATAGCAAACTTGGCCTTGCTTGGCTTTGGAGAT

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
ATCTTTGCCCTGCTGTTTGACAACCGCTACCTGTACATCATGGACTTGCGGACAGAGAGCCTGATTAGTCGCTGGCCTCTGCCAGAGTACAGGG

     1230       1240       1250       1260       1270       1280       1290       1300       1310
AATCAAAGAGAGGCTCAAGCTTCCTGGCAGGCGAACATCCTGGCTGAATGGACTGGATGGGCACAATGACACGGGCTTGGTCTTTGCCACCAGC

1320       1330       1340       1350       1360       1370       1380       1390       1400       1410
ATGCCTGACCACAGTATTCACCTGGTGTTGTGGAAGGAGCACGGCTGACACCATGAGCCACCACCGCTGACTGACTTTGGGTGCCGGGGCTGCG

      1420       1430       1440       1450       1460       1470
GGTTTTGGGTGCACCTCTGCGGCACGCGACTGCATGAACCAAAGTTCTCACCTAATGGTATCATCA
```

FIG. 4B

20040427.1430

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        10         20         30         40         50         60
MKRGGRDSDRNSSEEGTAEKSKKLRTTNEHSQTCDWGNLLQDIILQVFKYLPLLDRAHAS

        70         80         90        100        110        120
QVCRNWNQVFHMPDLWRCFEFELNQPATSYLKATHPELIKQIIYRHSNHLQYVSFKVDSS

       130        140        150        160        170        180
KESAEAACDILSQLVNCSLKTLGLISTARPSFMDLPKSHFISALTVVFVNSKSLSSLKID

       190        200        210        220        230        240
DTPVDDPSLKVLVANNSDTLKLLKMSSCPHVSPAGILCVADQCHGLRELALNYHLLSDEL

       250        260        270        280        290        300
LLALSSEKHVRLEHLRIDVVSENPGQTHFHTIQKSSWDAFIRHSPKVNLVMYFFLYEEEF

       310        320        330        340        350        360
DPFFRYEIPATHLYFGRSVSKDVLGRVGMTCPRLVELVVCANGLRPLDEELIRIAERCKN

       370        380        390        400        410        420
LSAIGLGECEVSCSAFVEFVKMCGGRLSQLSIMEEVLIPDQKYSLEQIHWEVSKHLGRVW

FPDMMPTW
```

FIG. 5A

20020164707

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         10         20         30         40         50         60         70         80         90
CGGGGTGGTGTGTGGGGGAAGCCGCCCCCGGCAGCAGGATGAAACGAGGAGGAAGAGATAGTGACCGTAATTCATCAGAAGAAGGAACTGCAGA

    100        110        120        130        140        150        160        170        180
GAAATCCAAGAAACTGAGGACTACAAATGAGCATTCTCAGACTTGTGATTGGGGTAATCTCCTTCAGGACATTATTCTCCAAGTATTTAAATAT

190        200        210        220        230        240        250        260        270        280
TTGCCTCTTCTTGACCGGGCTCATGCTTCACAAGTTTGCCGCAACTGGAACCAGGTATTTCACATGCCTGACTTGTGGAGATGTTTTGAATTTG

      290        300        310        320        330        340        350        360        370
AACTGAATCAGCCAGCTACATCTTATTTGAAAGCTACCCATCCAGAGCTGATCAAACAGATTATTAAAAGACATTCAAACCATCTACAATATGT

 380        390        400        410        420        430        440        450        460        470
CAGCTTCAAGGTGGACAGCAGCAAGGAATCAGCTGAAGCAGCTTGTGATATACTATCGCAACTTGTGAATTGCTCTTTAAAAACACTTGGACTT

        480        490        500        510        520        530        540        550        560
ATTTCAACTGCTCGACCAAGCTTTATGGATTTACCAAAGTCTCACTTTATCTCTGCACTGACAGTTGTGTTCGTAAACTCCAAATCCCTGTCTT

    570        580        590        600        610        620        630        640        650
CGCTTAAGATAGATGATACTCCAGTAGATGATCCATCTCTCAAAGTACTAGTGGCCAACAATAGTGATACACTCAAGCTGTTGAAAATGAGCAG

660        670        680        690        700        710        720        730        740        750
CTGTCCTCATGTCTCTCCAGCAGGTATCCTTTGTGTGGCTGATCAGTGTCACGGCTTAAGAGAACTAGCCCTGAACTACCACTTATTGAGTGAT

      760        770        780        790        800        810        820        830        840
GAGTTGTTACTTGCATTGTCTTCTGAAAAACATGTTCGATTAGAACATTTGCGCATTGATGTAGTCAGTGAGAATCCTGGACAGACACACTTCC

 850        860        870        880        890        900        910        920        930        940
ATACTATTCAGAAGAGTAGCTGGGATGCTTTCATCAGACATTCACCCAAAGTGAACTTAGTGATGTATTTTTTTTTATATGAAGAAGAATTTGA

        950        960        970        980        990       1000       1010       1020       1030
CCCCTTCTTTCGCTATGAAATACCTGCCACCCATCTGTACTTTGGGAGATCAGTAAGCAAAGATGTGCTTGGCCGTGTGGGAATGACATGCCCT

   1040       1050       1060       1070       1080       1090       1100       1110       1120
AGACTGGTTGAACTAGTAGTGTGTGCAAATGGATTACGGCCACTTGATGAAGAGTTAATTCGCATTGCAGAACGTTGCAAAAATTTGTCAGCTA

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
TTGGACTAGGGGAATGTGAAGTCTCATGTAGTGCCTTTGTTGAGTTTGTGAAGATGTGTGGTGGCCGCCTATCTCAATTATCCATTATGGAAGA

     1230       1240       1250       1260       1270       1280       1290       1300       1310
AGTACTAATTCCTGACCAAAAGTATAGTTTGGAGCAGATTCACTGGGAAGTGTCCAAGCATCTTGGTAGGGTGTGGTTTCCCGACATGATGCCC

 1320       1330       1340       1350       1360       1370       1380       1390       1400
ACTTGGTAAAAACTGCATGATGAATAGCACCTTAATTTCAAGCAAATGTATTATAATTAAAGTTTTATTTGCTGTAAAAAAAAAAAAAAAAA
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FIG. 5B

20070247.070202

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         10         20         30         40         50         60
MKRNSLSVENKIVQLSGAAKQPKVGFYSSLNQTHTHTVLLDWGSLPHHVVLQIFQYLPLL

         70         80         90        100        110        120
DRACASSVCRRWNEVFHISDLWRKFEFELNQSATSSFKSTHPDLIQQIIKKHFAHLQYVS

        130        140        150        160        170        180
FKVDSSAESAEAACDILSQLVNCSIQTLGLISTAKPSFMNVSESHFVSALTVVFINSKSL

        190        200        210        220        230        240
SSIKIEDTPVDDPSLKILVANNSDTLRLPKMSSCPHVSSDGILCVADRCQGLRELALNYY

        250        260        270        280        290        300
ILTDELFLALSSETHVNLEHLRIDVVSENPGQIKFHAVKKHSWDALIKHSPRVNVVMHFF

        310        320        330        340        350        360
LYEEEFETFFKEETPVTHLYFGRSVSKVVLGRVGLNCPRLIELVVCANDLQPLDNELICI

        370        380        390        400        410        420
AEHCTNLTALGLSKCEVSCSAFIRFVRLCERRLTQLSVMEEVLIPDEDYSLDEIHTEVSK

        430
YLGRVWFPDVMPLW
```

FIG. 6A

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          10         20         30         40         50         60
ACATTTTCTAATGTTTACAGAATGAAGAGGAACAGTTTATCTGTTGAGAATAAAATTGTCCAGTTGTCA

70         80         90        100        110        120        130
GGAGCAGCGAAACAGCCAAAAGTTGGGTTCTACTCTTCTCTCAACCAGACTCATACACACACGGTTCTT

140        150        160        170        180        190        200
CTAGACTGGGGGAGTTTGCCTCACCATGTAGTATTACAAATTTTTCAGTATCTTCCTTTACTAGATCGG

210        220        230        240        250        260        270
GCCTGTGCATCTTCTGTATGTAGGAGGTGGAATGAAGTTTTTCATATTTCTGACCTTTGGAGAAAGTTT

280        290        300        310        320        330        340
GAATTTGAACTGAACCAGTCAGCTACTTCATCTTTTAAGTCCACTCATCCTGATCTCATTCAGCAGATC

350        360        370        380        390        400        410
ATTAAAAAGCATTTTGCTCATCTTCAGTATGTCAGCTTTAAGGTTGACAGTAGCGCTGAGTCAGCAGAA

420        430        440        450        460        470        480
GCTGCCTGTGATATACTCTCTCAGCTGGTAAATTGTTCCATCCAGACCTTGGGCTTGATTTCAACAGCC

490        500        510        520        530        540        550
AAGCCAAGTTTCATGAATGTGTCGGAGTCTCATTTTGTGTCAGCACTTACAGTTGTTTTTATCAACTCA

560        570        580        590        600        610        620
AAATCATTATCATCAATCAAAATTGAAGATACACCAGTGGATGATCCTTCATTGAAGATTCTTGTGGCC

630        640        650        660        670        680        690
AATAATAGTGACACTCTAAGACTCCCAAAGATGAGTAGCTGTCCTCATGTTTCATCTGATGGAATTCTT

700        710        720        730        740        750
TGTGTAGCTGACCGTTGTCAAGGCCTTAGAGAACTGGCGTTGAATTATTACATCCTAACTGATGAACTT

760        770        780        790        800        810        820
TTCCTTGCACTCTCAAGCGAGACTCATGTTAACCTTGAACATCTTCGAATTGATGTTGTGAGTGAAAAT

830        840        850        860        870        880        890
CCTGGACAGATTAAATTTCATGCTGTTAAAAAACACAGTTGGGATGCACTTATTAAACATTCCCCTAGA

900        910        920        930        940        950        960
GTTAATGTTGTTATGCACTTCTTTCTATATGAAGAGGAATTCGAGACGTTCTTCAAAGAAGAAACCCCT

970        980        990       1000       1010       1020       1030
GTTACTCACCTTTATTTTGGTCGTTCAGTCAGCAAAGTGGTTTTAGGACGGGTAGGTCTCAACTGTCCT

1040       1050       1060       1070       1080       1090       1100
CGACTGATTGAGTTAGTGGTGTGTGCTAATGATCTTCAGCCTCTTGATAATGAACTTATTTGTATTGCT

1110       1120       1130       1140       1150       1160       1170
GAACACTGTACAAACCTAACAGCCTTGGGCCTCAGCAAATGTGAAGTTAGCTGCAGTGCCTTCATCAGG

1180       1190       1200       1210       1220       1230       1240
TTTGTAAGACTGTGTGAGAGAAGGTTAACACAGCTCTCTGTAATGGAGGAAGTTTTGATCCCTGATGAG

1250       1260       1270       1280       1290       1300       1310
GATTATAGCCTAGATGAAATTCACACTGAAGTCTCCAAATACCTGGGAAGAGTATGGTTCCCTGATGTG

1320
ATGCCTCTCTGG
```

FIG. 6B

3904-0076-2-1-0040-1-20040204

EP0942979 - 010202

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        10         20         30         40         50         60
MAGSEPRSGTNSPPPPFSDWGRLEAAILSGWKTFWQSVSKDRVARTTSREEVDEAASTLT

        70         80         90        100        110        120
RLPIDVQLYILSFLSPHDLCQLGSTNHYWNETVRNPILWRYFLLRDLPSWSSVDWKSLPY

       130        140        150        160        170        180
LQILKKPISEVSDGAFFDYMAVYLMCCPYTRRASKSSRPMYGAVTSFLHSLIIPNEPRFA

       190        200        210        220        230        240
LFGPRLEQLNTSLVLSLLSSEELCPTAGLPQRQIDGIGSGVNFQLNNQHKFNILILYSTT

       250        260        270        280        290        300
RKERDRAREEHTSAVNKMFSRHNEGDDRPGSRYSVIPQIQKLCEVVDGFIYVANAEAHKR

       310        320        330        340        350        360
HEWQDEFSHIMAMTDPAFGSSGRPLLVLSCISQGDVKRMPCFYLAHELHLNLLNHPWLVQ

       370        380        390        400        410        420
DTEAETLTGFLNGIEWILEEVESKRAR*FSFQILGTETI*NLLLRS*CEYLLSQPTLSCL

       430        440        450        460        470        480
FADRLSFGQL*LLCFLYYFYFLP*INYKKRVSVLVFSPKMNL*TFFW*FLYFLSF*KY*I

L
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FIG. 7A

Docket No. 5914-090

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          10         20         30         40         50         60
ATGGCGGGAAGCGAGCCGCGCAGCGGAACAAATTCGCCGCCGCCGCCCTTCAGCGACTGGGGCCGCCTG

70         80         90        100        110        120        130
GAGGCGGCCATCCTCAGCGGCTGGAAGACCTTCTGGCAGTCAGTGAGCAAGGATAGGGTGGCGCGTACG

140        150        160        170        180        190        200
ACCTCCCGGGAGGAGGTGGATGAGGCGGCCAGCACCCTGACGCGGCTGCCGATTGATGTACAGCTATAT

 210        220        230        240        250        260        270
ATTTTGTCCTTTCTTTCACCTCATGATCTGTGTCAGTTGGGAAGTACAAATCATTATTGGAATGAAACT

 280        290        300        310        320        330        340
GTAAGAAATCCAATTCTGTGGAGATACTTTTTGTTGAGGGATCTTCCTTCTTGGTCTTCTGTTGACTGG

 350        360        370        380        390        400        410
AAGTCTCTTCCATATCTACAAATCTTAAAAAAGCCTATATCTGAGGTCTCTGATGGTGCATTTTTTGAC

 420        430        440        450        460        470        480
TACATGGCAGTCTATCTAATGTGCTGTCCATACACAAGAAGAGCTTCAAAATCCAGCCGTCCTATGTAT

 490        500        510        520        530        540        550
GGAGCTGTCACTTCTTTTTTACACTCCCTGATCATTCCCAATGAACCTCGATTTGCTCTGTTTGGACCA

 560        570        580        590        600        610        620
CGTTTGGAACAATTGAATACCTCTTTGGTGTTGAGCTTGCTGTCTTCAGAGGAACTTTGCCCAACAGCT

 630        640        650        660        670        680        690
GGTTTGCCTCAGAGGCAGATTGATGGTATTGGATCAGGAGTCAATTTTCAGTTGAACAACCAACATAAA

 700        710        720        730        740        750
TTCAACATTCTAATCTTATATTCAACTACCAGAAAGGAAAGAGATAGAGCAAGGGAAGAGCATACAAGT

 760        770        780        790        800        810        820
GCAGTTAACAAGATGTTCAGTCGACACAATGAAGGTGATGATCGACCAGGAAGCCGGTACAGTGTGATT

 830        840        850        860        870        880        890
CCACAGATTCAAAAACTGTGTGAAGTTGTAGATGGGTTCATCTATGTTGCAAATGCTGAAGCTCATAAA

 900        910        920        930        940        950        960
AGACATGAATGGCAAGATGAATTTTCTCATATTATGGCAATGACAGATCCAGCCTTTGGGTCTTCGGGA

 970        980        990       1000       1010       1020       1030
AGACCATTGTTGGTTTTATCTTGTATTTCTCAAGGGGATGTAAAAAGAATGCCCTGTTTTTATTTGGCT

1040       1050       1060       1070       1080       1090       1100
CATGAGCTGCATCTGAATCTTCTAAATCACCCATGGCTGGTCCAGGATACAGAGGCTGAAACTCTGACT

1110       1120       1130       1140       1150       1160       1170
GGTTTTTTGAATGGCATTGAGTGGATTCTTGAAGAAGTGGAATCTAAGCGTGCAAGATGATTCTCTTTT

1180       1190       1200       1210       1220       1230       1240
CAGATCTTGGGAACTGAAACCATTTGAAATTTATTACTAAGGTCGTGATGTGAATATTTGCTCAGTCAG

1250       1260       1270       1280       1290       1300       1310
CCCACCTTGTCCTGCCTTTTTGCAGATAGGCTTTCATTTGGACAGCTATAACTGCTGTGTTTTTTATAT

1320       1330       1340       1350       1360       1370       1380
TATTTTTACTTTTTACCATAAATCAATTACAAGAAAAGAGTTTCAGTCCTAGTATTTAGCCCCAAAATG

1390       1400       1410       1420       1430       1440
AACCTTTAAACATTTTTTTGGTAATTTTTATATTTTCTGTCTTTTTAAAAATATTAAATTTTGG
```

FIG. 7B

US00/34547

```
        10         20         30         40         50         60
MSRRPCSCALRPPRCSCSASPSAVTAAGRPRPSDSCKEESSTLSVKMKCDFNCNHVHSGL

        70         80         90        100        110        120
KLVKPDDIGRLVSYTPAYLEGSCKDCIKDYERLSCIGSPIVSPRIVQLETESKRLHNKEN

       130        140        150        160        170        180
QHVQQTLNSTNEIEALETSRLYEDSGYSSFSLQSGLSEHEEGSLLEENFGDSLQSCLLQI

       190        200        210        220        230        240
QSPDQYPNKNLLPVLHFEKVVCSTLKKNAKRNPKVDREMLKEIIARGNFRLQNIIGRKMG

       250        260        270        280        290        300
LECVDILSELFRRGLRHVLATILAQLSDMDLINVSKVSTTWKKILEDDKGAFQLYSKAIQ

       310        320        330        340        350        360
RVTENNNKFSPHASTREYVMFRTPLASVQKSAAQTSLKKDAQTKLSNQGDQKGSTYSRHN

       370        380        390        400        410        420
EFSEVAKTLKKNESLKACIRCNSPAKYDCYLQRATCKREGCGFDYCTKCLCNYHTTKDCS

       430        440
DGKLLKASCKIGPLPGTKKSKKNLRRL
```

FIG. 8A

US006245760B1

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          10         20         30         40         50         60         70         80         90
AGGTTGCTCAGCTGCCCCCGGAGCGGTTCCTCCACCTGAGGCAGACACCACCTCGGTTGGCATGAGCCGGCGCCCCCTGCAGCTGCGCCCTACGG

     100        110        120        130        140        150        160        170        180
CCACCCCGCTGCTCCTGCAGCGCCAGCCCCAGCGCAGTGACAGCCGCCGGGCGCCCTCGACCCTCGGATAGTTGTAAAGAAGAAAGTTCTACCC

190        200        210        220        230        240        250        260        270        280
TTTCTGTCAAAATGAAGTGTGATTTTAATTGTAACCATGTTCATTCCGGACTTAAACTGGTAAAACCTGATGACATTGGAAGACTAGTTTCCTA

      290        300        310        320        330        340        350        360        370
CACCCCTGCATATCTGGAAGGTTCCTGTAAAGACTGCATTAAAGACTATGAAAGGCTGTCATGTATTGGGTCACCGATTGTGAGCCCTAGGATT

 380        390        400        410        420        430        440        450        460        470
GTACAACTTGAAACTGAAAGCAAGCGCTTGCATAACAAGGAAAATCAACATGTGCAACAGACACTTAATAGTACAAATGAAATAGAAGCACTAG

         480        490        500        510        520        530        540        550        560
AGACCAGTAGACTTTATGAAGACAGTGGCTATTCCTCATTTTCTCTACAAAGTGGCCTCAGTGAACATGAAGAAGGTAGCCTCCTGGAGGAGAA

     570        580        590        600        610        620        630        640        650
TTTCGGTGACAGTCTACAATCCTGCCTGCTACAAATACAAAGCCCAGACCAATATCCCAACAAAAACTTGCTGCCAGTTCTTCATTTTGAAAAA

660        670        680        690        700        710        720        730        740        750
GTGGTTTGTTCAACATTAAAAAAGAATGCAAAACGAAATCCTAAAGTAGATCGGGAGATGCTGAAGGAAATTATAGCCAGAGGAAATTTTAGAC

      760        770        780        790        800        810        820        830        840
TGCAGAATATAATTGGCAGAAAAATGGGCCTAGAATGTGTAGATATTCTCAGCGAACTCTTTCGAAGGGGACTCAGACATGTCTTAGCAACTAT

 850        860        870        880        890        900        910        920        930        940
TTTAGCACAACTCAGTGACATGGACTTAATCAATGTGTCTAAAGTGAGCACAACTTGGAAGAAGATCCTAGAAGATGATAAGGGGGCATTCCAG

         950        960        970        980        990       1000       1010       1020       1030
TTGTACAGTAAAGCAATACAAAGAGTTACCGAAAACAACAATAAATTTTCACCTCATGCTTCAACCAGAGAATATGTTATGTTCAGAACCCCAC

     1040       1050       1060       1070       1080       1090       1100       1110       1120
TGGCTTCTGTTCAGAAATCAGCAGCCCAGACTTCTCTCAAAAAAGATGCTCAAACCAAGTTATCCAATCAAGGTGATCAGAAAGGTTCTACTTA

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
TAGTCGACACAATGAATTCTCTGAGGTTGCCAAGACATTGAAAAAGAACGAAAGCCTCAAAGCCTGTATTCGCTGTAATTCACCTGCAAAATAT

     1230       1240       1250       1260       1270       1280       1290       1300       1310
GATTGCTATTTACAACGGGCAACCTGCAAACGAGAAGGCTGTGGATTTGATTATTGTACGAAGTGTCTCTGTAATTATCATACTACTAAAGACT

1320       1330       1340       1350       1360       1370       1380       1390       1400       1410
GTTCAGATGGCAAGCTCCTCAAAGCCAGTTGTAAAATAGGTCCCCTGCCTGGTACAAAGAAAAGCAAAAAGAATTTACGAAGATTGTGATCTCT

      1420       1430       1440       1450       1460       1470       1480       1490       1500
TATTAAATCAATTGTTACTGATCATGAATGTTAGTTAGAAAATGTTAGGTTTTAACTTAAAAAAAATTGTATTGTGATTTTCAATTTTATGTTG

 1510       1520       1530       1540       1550       1560       1570       1580       1590
AAATCGGTGTAGTATCCTGAGGTTTTTTTCCCCCCAGAAGATAAAGAGGATAGACAACCTCTTAAAATATTTTTACAATTTAATGAGAAAAAGT

1600       1610       1620       1630       1640       1650       1660       1670       1680       1690
TTAAAATTCTCAATACAAATCAAACAATTTAAATATTTTAAGAAAAAAGGAAAAGTAGATAGTGATACTGAGGGTAAAAAAAAAATTGATTCAA

     1700       1710       1720       1730       1740       1750       1760       1770       1780
TTTTATGGTAAAGGAAACCCATGCAATTTTACCTAGACAGTCTTAAATATGTCTGGTTTTCCATCTGTTAGCATTTCAGACATTTTATGTTCCT

1790       1800       1810       1820       1830       1840       1850       1860       1870       1880
CTTACTCAATTGATACCAACAGAAATATCAACTTCTGGAGTCTATTAAATGTGTTGTCACCTTTCTAAAGCTTTTTTTCATTGTGTGTATTTCC

      1890       1900       1910       1920       1930       1940       1950       1960       1970
CAAGAAAGTATCCTTTGTAAAAACTTGCTTGTTTTCCTTATTTCTGAAATCTGTTTTAATATTTTTGTATACATGTAAATATTTCTGTATTTTT

 1980       1990       2000       2010       2020       2030       2040       2050       2060
TATATGTCAAAGAATATGTCTCTTGTATGTACATATAAAAATAAATTTTGCTCAATAAAATTGTAAGCTTAAAAAAAAAAAAAAAAAAACTCGAG

2070
ACTAGTGC
```

FIG. 8B

```
        10         20         30         40         50         60
ARSGASALRRRRVQVWVLSRPPPGGGDSFRTRRPQRGPGPGGSQAMDAPHSKAALDSINE

        70         80         90        100        110        120
LPDNILLELFTHVPARQLLLNCRLVCSLWRDLIDLLTLWKRKCLRKGFITKDWDQPVADW

       130        140        150        160        170        180
KIFYFLRSLHRNLLRNPCAENDMFAWQIDFNGGDRWKVDSLPGAHGTEFPDPKVKKSFVT

       190        200        210        220        230        240
SYELCLKWELVDLLADRYWEELLDTFRPDIVVKDWFAARADCGCTYQLKVQLASADYFVL

       250        260        270        280        290        300
ASFEPPPVTIQQWNNATWTEVSYTFSDYPRGVRYILFQHGGRDTQYWAGWYGPRVTNSSI

       310        320        330
VVSPKMTRNQASSEAQPGQKHGQEEAAQSPYGAVVQIF
```

FIG. 9A

20040247.0004

09604754.030502

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        10         20         30         40         50         60         70         80         90
GCGCGTTCGGGAGCTTCGGCCCTGCGTAGGAGGCGGGTGCAGGTGTGGGTGCTGAGCCGCCCGCCGCCTGGAGGGGGAGACAGCTTCAGGACAC

   100        110        120        130        140        150        160        170        180
GCAGGCCGCAGCGAGGGCCCGGGCCCGGGGGATCCCAGGCCATGGACGCTCCCCACTCCAAAGCAGCCCTGGACAGCATTAACGAGCTGCCCGA

190        200        210        220        230        240        250        260        270        280
TAACATCCTGCTGGAGCTGTTCACGCACGTGCCCGCCCGCCAGCTGCTGCTGAACTGCCGCCTGGTCTGCAGCCTCTGGCGGGACCTCATCGAC

      290        300        310        320        330        340        350        360        370
CTCCTGACCCTCTGGAAACGCAAGTGCCTGCGAAAGGGCTTCATCACCAAGGACTGGGACCAGCCCGTGGCCGACTGGAAAATCTTCTACTTCC

 380        390        400        410        420        430        440        450        460        470
TACGGAGCCTGCATAGGAACCTCCTGCGCAACCCGTGTGCTGAAAACGATATGTTTGCATGGCAAATTGATTTCAATGGTGGGGACCGCTGGAA

        480        490        500        510        520        530        540        550        560
GGTGGATAGCCTCCCTGGAGCCCACGGGACAGAATTTCCTGACCCCAAAGTCAAGAAGTCTTTTGTCACATCCTACGAACTGTGCCTCAAGTGG

    570        580        590        600        610        620        630        640        650
GAGCTGGTGGACCTTCTAGCCGACCGCTACTGGGAGGAGCTACTAGACACATTCCGGCCGGACATCGTGGTTAAGGACTGGTTTGCTGCCAGAG

660        670        680        690        700        710        720        730        740        750
CCGACTGTGGCTGCACCTACCAACTCAAAGTGCAGCTGGCCTCGGCTGACTACTTCGTGTTGGCCTCCTTCGAGCCCCCACCTGTGACCATCCA

      760        770        780        790        800        810        820        830        840
ACAGTGGAACAATGCCACATGGACAGAGGTCTCCTACACCTTCTCAGACTACCCCCGGGGTGTCCGCTACATCCTCTTCCAGCATGGGGGCAGG

 850        860        870        880        890        900        910        920        930        940
GACACCCAGTACTGGGCAGGCTGGTATGGGCCCCGAGTCACCAACAGCAGCATTGTCGTCAGCCCCAAGATGACCAGGAACCAGGCCTCGTCCG

        950        960        970        980        990       1000       1010       1020       1030
AGGCTCAGCCTGGGCAGAAGCATGGACAGGAGGAGGCTGCCCAATCGCCCTACGGAGCTGTTGTCCAGATTTTCTGACAGCTGTCCATCCTGTG

  1040       1050       1060       1070       1080       1090       1100       1110       1120
TCTGGGTCAGCCAGAGGTTCCTCCAGGCAGGAGCTGAGCATGGGGTGGGCAGTGAGGTCCCTGTACCAGCGACTCCTGCCCCGGTTCAACCCTA

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
CCAGCTTGTGGTAACTTACTGTCACATAGCTCTGACGTTTTGTTGTAATAAATGTTTTCAGGCCGGGCACTGTGGCTCACGCCTGTAATCCCAG

     1230       1240       1250       1260       1270       1280       1290       1300       1310
CACTTTGGGAGACCGAGGCAGGTGGATCACGAGGTCAGGAGACAGAGACCATCCTGGCCAACACGGTGAAACCCTGTCTCTACTAAAAATACAA

1320       1330       1340       1350       1360       1370       1380       1390       1400       1410
AAAATTAGCCGGGCGTGGTGGCGGGCGCCTGTAGTCCCAGCTACTCGGGAGGCTGATGCAGAAGAATGGCGTGAACCCGGAAGGCAGAGCTTGC

      1420       1430       1440       1450       1460       1470       1480       1490       1500
AGTGAGCCGAGATCACGCCACTGCACTCCAGCCTGGGTGACAGAGCGAGACTCTGGCTCATAAAATAATAATAATAATAAATAAATAAAAAATA

  1510       1520       1530
AATGGTTTTCAGTAAAAAAAAAAAAAAAAAA
```

FIG. 9B

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        10         20         30         40         50         60
MSNTRFTITLNYKDPLTGDEETLASYGIVSGDLICLILHDDIPPPNIPSSTDSEHSSLQN

        70         80         90        100        110        120
NEQPSLATSSNQTSIQDEQPSDSFQGQAAQSGVWNDDSMLGPSQNFEAESIQDNAHMAEG

       130        140        150        160        170        180
TGFYPSEPLLCSESVEGQVPHSLETLYQSADCSDANDALIVLIHLLMLESGYIPQGTEAK

       190        200        210        220        230        240
ALSLPEKWKLSGVYKLQYMHHLCEGSSATLTCVPLGNLIVVNATLKINNEIRSVKRLQLL

       250        260        270        280        290        300
PESFICKEKLGENVANIYKDLQKLSRLFKDQLVYPLLAFTRQALNLPNVFGLVVLPLELK

       310        320        330        340        350        360
LRIFRLLDVRSVLSLSAVCRDLFTASNDPLLWRFLYLRDFRDNTVRVQDTDWKELYRKRH

       370        380        390        400        410        420
IQRKESPKGRFVLLLPSSTHTIPFYPNPLHPRPFPSSRLPPGIIGGEYDQRPTLPYVGDP

       430        440        450        460        470        480
ISSLIPGPGETPSQLPPLRPRFDPVGPLPGPNPILPGRGGPNDRFPFRPSRGRPTDGRLS

FM
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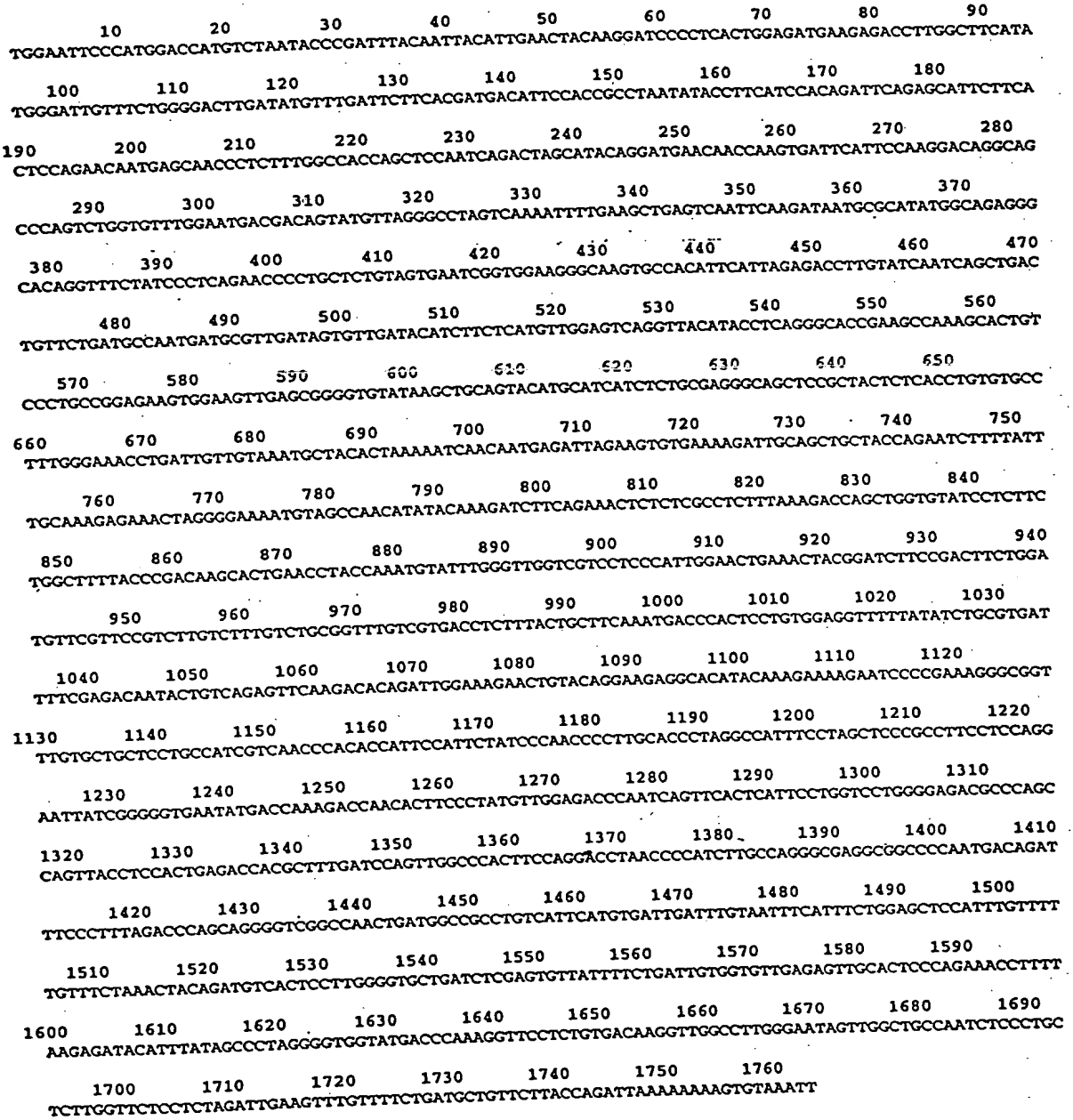
FIG. 10A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TGGGATTGTTTCTGGGGACTTGATATGTTTGATTCTTCACGATGACATTCCACCGCCTAATATACCTTCATCCACAGATTCAGAGCATTCTTCA
190 200 210 220 230 240 250 260 270 280
CTCCAGAACAATGAGCAACCCTCTTTGGCCACCAGCTCCAATCAGACTAGCATACAGGATGAACAACCAAGTGATTCATTCCAAGGACAGGCAG
290 300 310 320 330 340 350 360 370
CCCAGTCTGGTGTTTGGAATGACGACAGTATGTTAGGGCCTAGTCAAAATTTTGAAGCTGAGTCAATTCAAGATAATGCGCATATGGCAGAGGG
380 390 400 410 420 430 440 450 460 470
CACAGGTTTCTATCCCTCAGAACCCCTGCTCTGTAGTGAATCGGTGGAAGGGCAAGTGCCACATTCATTAGAGACCTTGTATCAATCAGCTGAC
480 490 500 510 520 530 540 550 560
TGTTCTGATGCCAATGATGCGTTGATAGTGTTGATACATCTTCTCATGTTGGAGTCAGGTTACATACCTCAGGGCACCGAAGCCAAAGCACTGT
570 580 590 600 610 620 630 640 650
CCCTGCCGGAGAAGTGGAAGTTGAGCGGGGTGTATAAGCTGCAGTACATGCATCATCTCTGCGAGGGCAGCTCCGCTACTCTCACCTGTGTGCC
660 670 680 690 700 710 720 730 740 750
TTTGGGAAACCTGATTGTTGTAAATGCTACACTAAAAATCAACAATGAGATTAGAAGTGTGAAAAGATTGCAGCTGCTACCAGAATCTTTTATT
760 770 780 790 800 810 820 830 840
TGCAAAGAGAAACTAGGGGAAAATGTAGCCAACATATACAAAGATCTTCAGAAACTCTCTCGCCTCTTTAAAGACCAGCTGGTGTATCCTCTTC
850 860 870 880 890 900 910 920 930 940
TGGCTTTTACCCGACAAGCACTGAACCTACCAAATGTATTTGGGTTGGTCGTCCTCCCATTGGAACTGAAACTACGGATCTTCCGACTTCTGGA
950 960 970 980 990 1000 1010 1020 1030
TGTTCGTTCCGTCTTGTCTTTGTCTGCGGTTTGTCGTGACCTCTTTACTGCTTCAAATGACCCACTCCTGTGGAGGTTTTTATATCTGCGTGAT
1040 1050 1060 1070 1080 1090 1100 1110 1120
TTTCGAGACAATACTGTCAGAGTTCAAGACACAGATTGGAAAGAACTGTACAGGAAGAGGCACATACAAAGAAAAGAATCCCCGAAAGGGCGGT
1130 1140 1150 1160 1170 1180 1190 1200 1210 1220
TTGTGCTGCTCCTGCCATCGTCAACCCACACCATTCCATTCTATCCCAACCCCTTGCACCCTAGGCCATTTCCTAGCTCCCGCCTTCCTCCAGG
1230 1240 1250 1260 1270 1280 1290 1300 1310
AATTATCGGGGGTGAATATGACCAAAGACCAACACTTCCCTATGTTGGAGACCCAATCAGTTCACTCATTCCTGGTCCTGGGGAGACGCCCAGC
1320 1330 1340 1350 1360 1370 1380 1390 1400 1410
CAGTTACCTCCACTGAGACCACGCTTTGATCCAGTTGGCCCACTTCCAGGACCTAACCCCATCTTGCCAGGGCGAGGCGGCCCCAATGACAGAT
1420 1430 1440 1450 1460 1470 1480 1490 1500
TTCCCTTTAGACCCAGCAGGGGTCGGCCAACTGATGGCCGCCTGTCATTCATGTGATTGATTTGTAATTTCATTTCTGGAGCTCCATTTGTTTT
1510 1520 1530 1540 1550 1560 1570 1580 1590
TGTTTCTAAACTACAGATGTCACTCCTTGGGGTGCTGATCTCGAGTGTTATTTTCTGATTGTGGTGTTGAGAGTTGCACTCCCAGAAACCTTTT
1600 1610 1620 1630 1640 1650 1660 1670 1680 1690
AAGAGATACATTTATAGCCCTAGGGGTGGTATGACCCAAAGGTTCCTCTGTGACAAGGTTGGCCTTGGGAATAGTTGGCTGCCAATCTCCCTGC
1700 1710 1720 1730 1740 1750 1760
TCTTGGTTCTCCTCTAGATTGAAGTTTGTTTTCTGATGCTGTTCTTACCAGATTAAAAAAAAGTGTAAATT

FIG. 10B

3905474.050502

```
        10         20         30         40         50         60
ETSKLG*SAVLAPAAGGTLSSEGRSAVSGILIAVTSTGVDK*SLNQLLHGLGTSSRLSHF

        70         80         90        100        110        120
PFG*KSPPRGQFVAAAVEIAGRSGLQMGQGLWRVVRNQQLQQEGYSEQGYLTREQSRRMA

       130        140        150        160        170        180
ASNISNTNHRKQVQGGIDIYHLLKARKSKEQEGFINLEMLPPELSFTILSYLNATDLCLA

       190        200        210        220        230        240
SCVWQDLANDELLWQGLCKSTWGHCSIYNKNPPLGFSFRKXYMQLDEGSLTFNANPDEGV

       250        260        270        280        290        300
NYFMSKGILDDSPKEIAKFIFCTRTLNWKKLRIYLDERRDVLDDLVTLHNFRNQFLPNAL

       310        320        330        340        350        360
REFFRHIHAPEERGEYLETLITKFSHRFCACNPDLMRELGLSPDAVYVLCYSLILLSIDL

       370        380        390        400        410        420
TSPHVKNKMSKREFIRNTRRAAQNISEDFVGHLYDNIYLIGHVAA*KAQLLGLQFLLQTK

       430        440        450        460        470        480
ATQGLSRYGGYISAGHCSLSIQSSFSVQPFFLLPFSILVISLGN*IILQNFS*FCLSRFA

       490        500        510        520        530        540
QSRATV*HSC*RMIN*HYTLKDGVFVH*ICLKNFIHFHSLYKYHVMCTYLTKEIYSHNYF

       550        560        570        580        590        600
IVKILTKVFPFLSN*VLKFI*F*SETIVXVKVRSDFRQKPIPASFSFKL*RVLICYYITM

       610        620        630        640        650
QNWQLFL*YKFII*FFILKTGLIKSR*VL*TI*DF*NIKIYDLHS*E*NKIXLELW
```

FIG. 11A

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        10         20         30         40         50         60         70         80         90
GGAAACGTCAAAATTGGGATAGTCGGCAGTTCTGGCCCCTGCAGCTGGAGGTACCCTGAGTTCTGAGGGTCGTAGTGCTGTTTCTGGTATTCTC

    100        110        120        130        140        150        160        170        180
ATCGCGGTCACCTCTACCGGTGTGGACAAGTAAAGTTTGAATCAGCTTCTCCATGGCCTGGGCACCAGTTCCCGGCTGAGCCATTTTCCTTTTG

190        200        210        220        230        240        250        260        270        280
GCTAAAAGTCCCCGCCCAGAGGCCAATTCGTCGCGGCGGCGGTGGAGATCGCAGGTCGCTCAGGCTTGCAGATGGGTCAAGGGTTGTGGAGAGT

      290        300        310        320        330        340        350        360        370
GGTCAGAAACCAGCAGCTGCAACAAGAAGGCTACAGTGAGCAAGGCTACCTCACCAGAGAGCAGAGCAGGAGAATGGCTGCGAGCAACATTTCT

 380        390        400        410        420        430        440        450        460        470
AACACCAATCATCGTAAACAAGTCCAAGGAGGCATTGACATATATCATCTTTTGAAGGCAAGGAAATCGAAAGAACAGGAAGGATTCATTAATT

        480        490        500        510        520        530        540        550        560
TGGAAATGTTGCCTCCTGAGCTAAGCTTTACCATCTTGTCCTACCTGAATGCAACTGACCTTTGCTTGGCTTCATGTGTTTGGCAGGACCTTGC

    570        580        590        600        610        620        630        640        650
GAATGATGAACTTCTCTGGCAAGGGTTGTGCAAATCCACTTGGGGTCACTGTTCCATATACAATAAGAACCCACCTTTAGGATTTTCTTTTAGA

660        670        680        690        700        710        720        730        740        750
AAAKTGTATATGCAGCTGGATGAAGGCAGCCTCACCTTTAATGCCAACCCAGATGAGGGAGTGAACTACTTTATGTCCAAGGGTATCCTGGATG

      760        770        780        790        800        810        820        830        840
ATTCGCCAAAGGAAATAGCAAAGTTTATCTTCTGTACAAGAACACTAAATTGGAAAAAACTGAGAATCTATCTTGATGAAAGGAGAGATGTCTT

 850        860        870        880        890        900        910        920        930        940
GGATGACCTTGTAACATTGCATAATTTTAGAAATCAGTTCTTGCCAAATGCACTGAGAGAATTTTTTCGTCATATCCATGCCCCTGAAGAGCGT

        950        960        970        980        990       1000       1010       1020       1030
GGAGAGTATCTTGAAACTCTTATAACAAAGTTCTCACATAGATTCTGTGCTTGCAACCCTGATTTAATGCGAGAACTTGGCCTTAGTCCTGATG

   1040       1050       1060       1070       1080       1090       1100       1110       1120
CTGTCTATGTACTGTGCTACTCTTTGATTCTACTTTCCATTGACCTCACTAGCCCTCATGTGAAGAATAAAATGTCAAAAAGGGAATTTATTCG

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
AAATACCCGTCGCGCTGCTCAAAATATTAGTGAAGATTTTGTAGGGCATCTTTATGACAATATCTACCTTATTGGCCATGTGGCTGCATAAAAA

      1230       1240       1250       1260       1270       1280       1290       1300       1310
GCACAATTGCTAGGACTTCAGTTTTTACTTCAGACTAAAGCTACCCAAGGACTTAGCAGATATGGGGGTTACATCAGTGCTGGTCATTGTAGCC

1320       1330       1340       1350       1360       1370       1380       1390       1400       1410
TGAGTATACAATCAAGCTTCAGTGTGCAACCTTTTTTTCTTTTGCCATTTTCTATTTTAGTAATTTCCTTGGGGAACTAAATAATTTTGCAGAA

      1420       1430       1440       1450       1460       1470       1480       1490       1500
TTTTTCCTAATTTTGTTTATCACGTTTTGCACAAAGCAGAGCCACTGTCTAACACAGCTGTTAACGAATGATAAACTGACATTATACTCTAAAA

   1510       1520       1530       1540       1550       1560       1570       1580       1590
GATGGTGTATTTGTGCATTAGATTTGCCTGAAAAACTTTATCCATTTCCATTCTTTATACAAATACCATGTAATGTGTACATATTTAACTAAAG

1600       1610       1620       1630       1640       1650       1660       1670       1680       1690
AGATTTATAGTCATAATTATTTTATTGTAAAGATTTTAACTAAAGTTTTTCCTTTTCTCTCAAACTGAGTTCTGAAATTTATTTGATTCTGATC

      1700       1710       1720       1730       1740       1750       1760       1770       1780
TGAAACTATTGTCTYCGTAAAAGTTAGATCTGACTTCAGRCAGAAACCAATACCAGCTTCCTTTTCCTTTAAACTTTGAAGAGTGTTGATTTGT

1790       1800       1810       1820       1830       1840       1850       1860       1870       1880
TACTATATTACTATGCAAAACTGGCAGTTATTTTTATAATATAAATTTATAATTTGATTTTTTATTTTAAAAACTGGGTTAATCAAGTCTCGGT

      1890       1900       1910       1920       1930       1940       1950       1960       1970
AAGTCCTTTAAACCATTTAGGATTTTTAAAACATCAAAATTTATGATTTACATTCATAGGAATAAAATAAAATATYATTAGAACTCTGGT
```

FIG. 11B

```
        10         20         30         40         50         60
MAAAAVDSAMEVVPALAEEAAPEVAGLSCLVNLPGEVLEYILCCGSLTAADIGRVSSTCR

        70         80         90        100        110        120
RLRELCQSSGKVWKEQFRVRWPSLMKHYSPTDYVNWLEEYKVRQKAGLEARKIVASFSKR

       130        140        150        160        170        180
FFSEHVPCNGFSDIENLEGPEIFFEDELVCILNMEGRKALTWKYYAKKILYYLRQQKILN

       190        200        210        220        230        240
NLKAFLQQPDDYESYLEGAVYIDQYCNPLSDISLKDIQAQIDSIVELVCKTLRGINSRHP

       250        260        270        280        290        300
SLAFKAGESSMIMEIELQSQVLDAMNYVLYDQLKFKGNRMDYYNALNLYMHQVLIRRTGI

       310        320        330        340        350        360
PISMSLLYLTIARQLGVPLEPVNFPSHFLLRWCQGAEGATLDIFDYIYIDAFGKGKQLTV

       370        380        390        400        410        420
KECEYLIGQHVTAALYGVVNVKKVLQRMVGNLLSLGKREGIDQSYQLLRDSLDLYLAMYP

       430        440        450        460        470        480
DQVQLLLLQARLYFHLGIWPEKVLDILQHIQTLDPGQHGAVGYLVQHTLEHIERKKEEVG

       490        500        510        520        530        540
VEVKLRSDEKHRDVCYSIGLIMKHKRYGYNCVIYGWDPTCMMGHEWIRNMNVHSLPHGHH

       550        560        570        580        590        600
QPFYNVLVEDGSCRYAAQENLEYNVEPQEISHPDVGRYFSEFTGTHYIPNAELEIRYPED

       610        620
LEFVYETVQNIYSAKKENIDE
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FIG. 12A

US 6,284,471 B1 Sep. 4, 2001

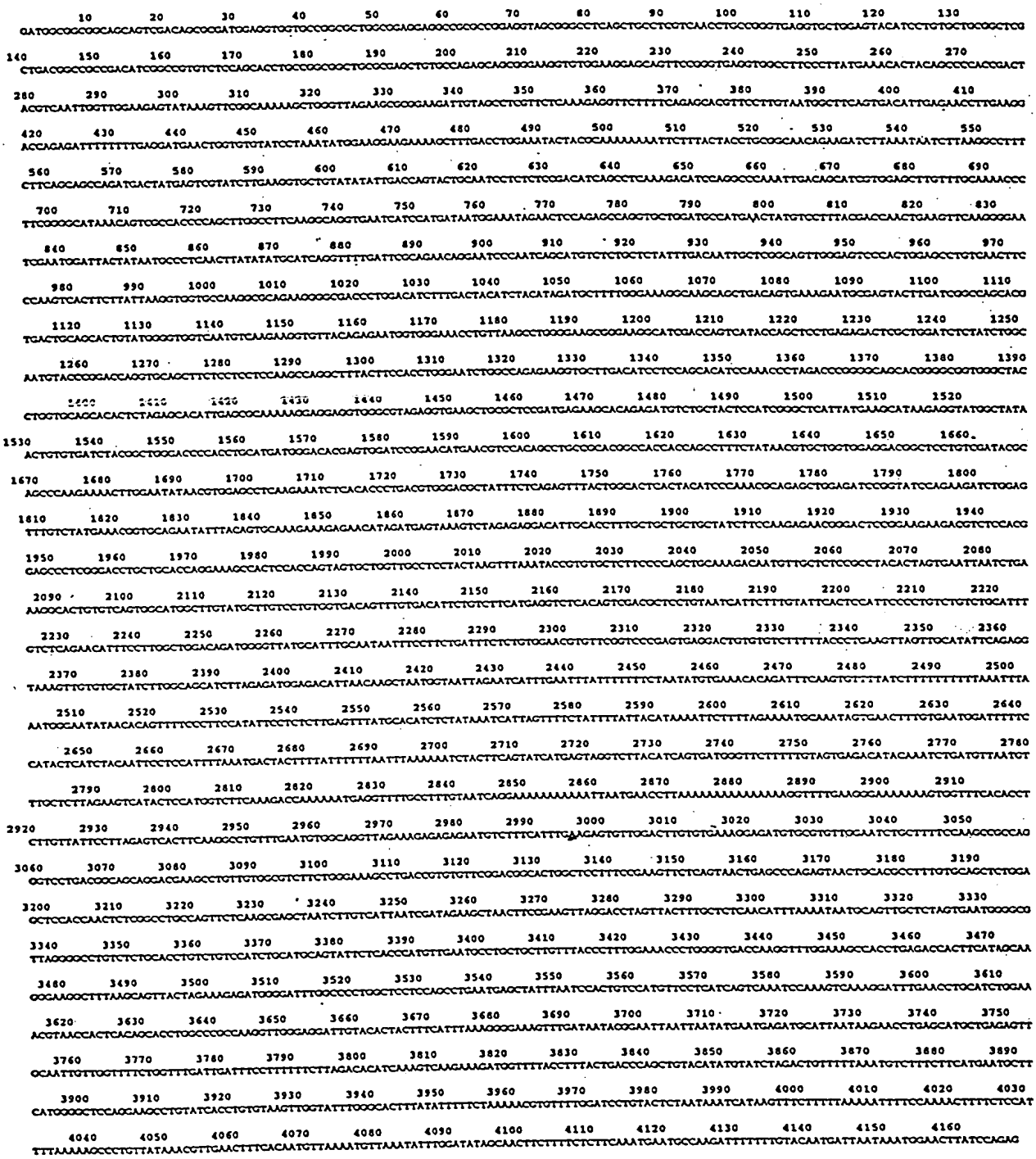

FIG. 12B

US005747028

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        10         20         30         40         50         60
RSTGFRRAGEEWSR*XLAASPGXLRRPAXTFVLSNLAEVVERVLTFLPAKALLRVACVCR

        70         80         90
LWRECVRRVLRTHRSVTWISAGLAEAGHLXGH
```

FIG. 13A

```
        10         20         30         40         50         60
CCGTAGTACTGGNTTCCGGCGGGCTGGTGAGGAATGGAGCCGGTAGNTGCTTGCGGCGAG

        70         80         90        100        110        120
TCCCGGGNTCCTCCGTAGACCCGCGGANACCTTCGTGTTGAGTAACCTGGCGGAGGTGGT

       130        140        150        160        170        180
GGAGCGTGTGCTCACCTTCCTGCCCGCCAAGGCGTTGCTGCGGGTGGCCTGCGTGTGCCG

       190        200        210        220        230        240
CTTATGGAGGGAGTGTGTGCGCAGAGTATTGCGGACCCATCGGAGCGTAACCTGGATCTC

       250        260        270
CGCAGGCCTGGCGGAGGCCGGCCACCTGGNGGGGCATT
```

FIG. 13B

10054254 .010705

20040242704

```
         10         20         30         40         50         60
RPRPVQQQQQQPPQQPPPQPPQQQPPQQQPPPPPQQQQQQQQPPPPPPPPPPLPQERNNVG

         70         80         90        100        110        120
ERDDDVPADMVAEESGPGAQNSPYQLRRKTLLPKRTACPTKNSMEGASTSTTENFGHRAK

        130        140        150        160        170        180
RARVSGKSQDLSAAPAEQYLQEKLPDEVVLKIFSYLLEQDLCRAACVCKRFSELANDPNL

        190
WKRLYMEVFEYTRPMMH
```

FIG. 14A

Sequence: 4 of 24

```
        10         20         30         40         50         60
GCGGCCGCGCCCGGTGCAGCAACAGCAGCAGCAGCCCCCGCAGCAGCCGCCGCCGCAGCC

        70         80         90        100        110        120
GCCCCAGCAGCAGCCGCCCCAGCAGCAGCCTCCGCCGCCGCCGCAGCAGCAGCAGCAGCA

       130        140        150        160        170        180
GCAGCCTCCGCCGCCGCCACCGCCGCCTCCGCCGCTGCCTCAGGAGCGGAACAACGTCGG

       190        200        210        220        230        240
CGAGCGGGATGATGATGTGCCTGCAGATATGGTTGCAGAAGAATCAGGTCCTGGTGCACA

       250        260        270        280        290        300
AAATAGTCCATACCAACTTCGTAGAAAAACTCTTTTGCCGAAAAGAACAGCGTGTCCCAC

       310        320        330        340        350        360
AAAGAACAGTATGGAGGGCGCCTCAACTTCAACTACAGAAAACTTTGGTCATCGTGCAAA

       370        380        390        400        410        420
ACGTGCAAGAGTGTCTGGAAAATCACAAGATCTATCAGCAGCACCTGCTGAACAGTATCT

       430        440        450        460        470        480
TCAGGAGAAACTGCCAGATGAAGTGGTTCTAAAAATCTTCTCTTACTTGCTGGAACAGGA

       490        500        510        520        530        540
TCTTTGTAGAGCAGCTTGTGTATGTAAACGCTTCAGTGAACTTGCTAATGATCCCAATTT

       550        560        570        580        590
GTGGAAACGATTATATATGGAAGTATTTGAATATACTCGCCCTATGATGCAT
```

FIG. 14B

20040247.070202

```
          10         20         30         40         50         60
RPRPGLRGGRAPCEVTMEAGGLPLELWRMILAYLHLPDLGRCSLVCRAWYELILSLDSTR

          70         80         90        100        110        120
WRQLCLGCTECRHPNWPNQPDVEPESWREAFKQHYLASKTWTKNALDLESSICFSLFRRR

         130        140        150        160        170
RERRTLSVGPGREFDSLGSALAMASLYDRIVLFPGVYEEQGEIILKVPVEIVGQGKLG
```

FIG. 15A

US 6,444,423 B1 Sep. 3, 2002

```
        10         20         30         40         50         60
GCGGCCGCGGCCCGGACTCCGCGGTGGGCGAGCGCCCTGTGAGGTGACCATGGAGGCTGG

        70         80         90        100        110        120
TGGCCTCCCCTTGGAGCTGTGGCGCATGATCTTAGCCTACTTGCACCTTCCCGACCTGGG

       130        140        150        160        170        180
CCGCTGCAGCCTGGTATGCAGGGCCTGGTATGAACTGATCCTCAGTCTCGACAGCACCCG

       190        200        210        220        230        240
CTGGCGGCAGCTGTGTCTGGGTTGCACCGAGTGCCGCCATCCCAATTGGCCCAACCAGCC

       250        260        270        280        290        300
AGATGTGGAGCCTGAGTCTTGGAGAGAAGCCTTCAAGCAGCATTACCTTGCATCCAAGAC

       310        320        330        340        350        360
ATGGACCAAGAATGCCTTGGACTTGGAGTCTTCCATCTGCTTTTCTCTATTCCGCCGGAG

       370        380        390        400        410        420
GAGGGAACGACGTACCCTGAGTGTTGGGCCAGGCCGTGAGTTTGACAGCCTGGGCAGTGC

       430        440        450        460        470        480
CTTGGCCATGGCCAGCCTGTATGACCGAATTGTGCTCTTCCCAGGTGTGTACGAAGAGCA

       490        500        510        520        530
AGGTGAAATCATCTTGAAGGTGCCTGTGGAGATTGTAGGGCAGGGGAAGTTGGGTGA
```

FIG. 15B

US 2004/0214752 A1 Oct. 28, 2004

```
        10         20         30         40         50         60
ETETAPLTLESLPTDPLLLILSFLDYRDLINCCYVSRRLSQLSSHDPLWRRHCKKYWLIS

        70         80         90        100        110        120
EEEKTQKNQCWKSLFIDTYSDVGRYIDHYAAIKKASGMISRNIWSPGVLGWVLSLKEGCS

       130        140        150        160        170        180
RGRPRCCGSADWAASFLDDYRCSYRIHNGQKLVGSWGYWEAWHCLITIVLKIC*TSIQLP

       190        200        210        220        230        240
EIPAETGTEILSPFNFCIHTGLSQYIAVEAAEG*NKNEVFYQCQTVERVFKYGIKMCSDG

       250
CINGMH*VFS
```

FIG. 16A

5914-090 Patent

```
        10         20         30         40         50         60
GAGACCGAGACGGCGCCGCTGACCCTAGAGTCGCTGCCCACCGATCCCCTGCTCCTCATC

        70         80         90        100        110        120
TTATCCTTTTTGGACTATCGGGATCTAATCAACTGTTGTTATGTCAGTCGAAGATTAAGC

       130        140        150        160        170        180
CAGCTATCAAGTCATGATCCGCTGTGGAGAAGACATTGCAAAAAATACTGGCTGATATCT

       190        200        210        220        230        240
GAGGAAGAGAAAACACAGAAGAATCAGTGTTGGAAATCTCTCTTCATAGATACTTACTCT

       250        260        270        280        290        300
GATGTAGGAAGATACATTGACCATTATGCTGCTATTAAAAAGGCCTCGGGAATGATCTCA

       310        320        330        340        350        360
AGAAATATTTGGAGCCCAGGTGTCCTCGGATGGGTTTTATCTCTGAAAGAGGGGTGCTCG

       370        380        390        400        410        420
AGAGGAAGACCTCGATGCTGTGGAAGCGCAGATTGGGCTGCAAGTTTCCTGGACGATTAT

       430        440        450        460        470        480
CGATGTTCATACCGAATTCACAATGGACAGAAGTTAGTTGGTTCCTGGGGTTATTGGGAA

       490        500        510        520        530        540
GCATGGCACTGTCTAATCACTATCGTTCTGAAGATTTGTTAGACGTCGATACAGCTGCCG

       550        560        570        580        590        600
GAGATTCCAGCAGAGACAGGGACTGAAATACTGTCTCCCTTTAACTTTTGCATACATACT

       610        620        630        640        650        660
GGTTTGAGTCAGTACATAGCAGTGGAAGCTGCAGAGGGTTGAAACAAAAATGAAGTTTTC

       670        680        690        700        710        720
TACCAATGTCAGACAGTAGAACGTGTGTTTAAATATGGCATTAAGATGTGTTCTGATGGT

       730        740        750
TGTATAAATGGCATGCATTAGGTATTTTCAG
```

FIG. 16B

20020042705

```
         10         20         30         40         50         60
GSGFRAGGWPLTMPGKHQHFQEPEVGCCGKYFLFGFNIVFWVLGALFLAIGLWAWGEKGV

         70         80         90        100        110        120
LSNISALTDLGGLDPVWLVCGSWRRHVGAGLCWAAIGALRENTFLLKFFXXFLGLIFFLE

LA
```

FIG. 17A

2004047402.4.03.2004

```
        10         20         30         40         50         60
GGCTCCGGTTTCCGGGCCGGCGGGTGGCCGCTCACCATGCCCGGNAAGCACCAGCATTTC

        70         80         90        100        110        120
CAGGAACCTGAGGTCGGCTGCTGCGGGAAATACTTCCTGTTTGGCTTCAACATTGTCTTC

       130        140        150        160        170        180
TGGGTGCTGGGAGCCCTGTTCCTGGCTATCGGCCTCTGGGCCTGGGGTGAGAAGGGCGTT

       190        200        210        220        230        240
CTCTCGAACATCTCAGCGCTGACAGATCTGGGAGGCCTTGACCCCGTGTGGCTTGTTTGT

       250        260        270        280        290        300
GGTAGTTGGAGGCGTCATGTCGGTGCTGGGCTTTGCTGGGCTGCAATTGGGGCCCTCCGG

       310        320        330        340        350        360
GAGAACACCTTCCTGCTCAAGTTTTTCTNCGNGTTCCTCGGTCTCATCTTCTTCCTGGAG

CTGGCAAC
```

FIG. 17B

US 20040214763A1

```
        10         20         30         40         50         60
AAAAAAAYLDELPEPLLLRVLAALPAAELVQACRLVCLRWKELVDGAPLWLLKCQQEGLVP

        70         80         90        100        110        120
EGGVEEERDHWQQFYFLSKRRRNLLRNPCGEEDLEGWCDVEHGGDGWRVEELPGDSGVEF

       130        140        150        160        170        180
THDESVKKYFASSFEWCRKAQVIDLQAEGYWEELLDTTQPAIVVKDWYSGRSDAGCLYEL

       190        200        210        220        230        240
TVKLLSEHENVLAEFSSGQVAVPQDSDGGGWMEISHTFTDYGPGVRFVRFEHGGQGSVYW

       250
KGWFGARVTNSSVWVEP*
```

FIG. 18A

EP 0 454 804 B1

```
          10         20         30         40         50         60
GCGGCGGCCGCCGCCGCGTACCTGGACGAGCTGCCCGAGCCGCTGCTGCTGCGCGTGCTGGCCGCACTG

70         80         90        100        110        120        130
CCGGCCGCCGAGCTGGTGCAGGCCTGCCGCCTGGTGTGCCTGCGCTGGAAGGAGCTGGTGGACGGCGCC

140        150        160        170        180        190        200
CCGCTGTGGCTGCTCAAGTGCCAGCAGGAGGGGCTGGTGCCCGAGGGCGGCGTGGAGGAGGAGCGCGAC

210        220        230        240        250        260        270
CACTGGCAGCAGTTCTACTTCCTGAGCAAGCGGCGCCGCAACCTTCTGCGTAACCCGTGTGGGGAAGAG

 280        290        300        310        320        330        340
GACTTGGAAGGCTGGTGTGACGTGGAGCATGGTGGGGACGGCTGGAGGGTGGAGGAGCTGCCTGGAGAC

 350        360        370        380        390        400        410
AGTGGGGTGGAGTTCACCCACGATGAGAGCGTCAAGAAGTACTTCGCCTCCTCCTTTGAGTGGTGTCGC

 420        430        440        450        460        470        480
AAAGCACAGGTCATTGACCTGCAGGCTGAGGGCTACTGGGAGGAGCTGCTGGACACGACTCAGCCGGCC

 490        500        510        520        530        540        550
ATCGTGGTGAAGGACTGGTACTCGGGCCGCAGCGACGCTGGTTGCCTCTACGAGCTCACCGTTAAGCTA

 560        570        580        590        600        610        620
CTGTCCGAGCACGAGAACGTGCTGGCTGAGTTCAGCAGCGGGCAGGTGGCAGTGCCCCAAGACAGTGAC

 630        640        650        660        670        680        690
GGCGGGGGCTGGATGGAGATCTCCCACACCTTCACCGACTACGGGCCGGGCGTCCGCTTCGTCCGCTTC

 700        710        720        730        740        750
GAGCACGGGGGGCAGGGCTCCGTCTACTGGAAGGGCTGGTTCGGGGCCCGGGTGACCAACAGCAGCGTG

760        770
TGGGTAGAACCCTGA
```

FIG. 18B

20040247.0126

```
        10         20         30         40         50         60
MGEKAVPLLRRRRVKRSCPSCGSELGVEEKRGKGNPISIQLFPPELVEHIISFLPVRDLV

        70         80         90        100        110        120
ALGQTCRYFHEVCDGEGVWRRICRRLSPRLQDQDTKGLYFQAFGGRRRCLSKSVAPLLAH

       130        140        150        160        170        180
GYRRFLPTKDHVFILDYVGTLFFLKNALVSTLGQMQWKRACRYVVLCRGAKDFASDPRCD

       190        200        210        220        230        240
TVYRKYLYVLATREPQEVVGTTSSRACDCVEVYLQSSGQRVFKMTFHHSMTFKQIVLVGQ

       250        260        270        280        290        300
ETQRALLLLTEEGKIYSLVVNETQLDQPRSYTVQLALRKVSHYLPHLRVACMTSNQSSTL

       310
YVTDPILCSWLQPPWPGG
```

FIG. 19A

20040-0-NP-2-Feb-2004

```
        10         20         30         40         50         60
ATGGGCGAGAAGGCGGTCCCTTTGCTAAGGAGGAGGCGGGTGAAGAGAAGCTGCCCTTCTTGTGGCTCG

70         80         90        100        110        120        130
GAGCTTGGGGTTGAAGAGAAGAGGGGGAAAGGAAATCCGATTTCCATCCAGTTGTTCCCCCCAGAGCTG

140        150        160        170        180        190        200
GTGGAGCATATCATCTCATTCCTCCCAGTCAGAGACCTTGTTGCCCTCGGCCAGACCTGCCGCTACTTC

 210        220        230        240        250        260        270
CACGAAGTGTGCGATGGGGAAGGCGTGTGGAGACGCATCTGTCGCAGACTCAGTCCGCGCCTCCAAGAT

 280        290        300        310        320        330        340
CAGGACACGAAGGGCCTGTATTTCCAGGCATTTGGAGGCCGCCGCCGATGTCTCAGCAAGAGCGTGGCC

  350        360        370        380        390        400        410
CCCTTGCTAGCCCACGGCTACCGCCGCTTCTTGCCCACCAAGGATCACGTCTTCATTCTTGACTACGTG

   420        430        440        450        460        470        480
GGGACCCTCTTCTTCCTCAAAAATGCCCTGGTCTCCACCCTCGGCCAGATGCAGTGGAAGCGGGCCTGT

    490        500        510        520        530        540        550
CGCTATGTTGTGTTGTGTCGTGGAGCCAAGGATTTTGCCTCGGACCCAAGGTGTGACACAGTTTACCGT

     560        570        580        590        600        610        620
AAATACCTCTACGTCTTGGCCACTCGGGAGCCGCAGGAAGTGGTGGGTACCACCAGCAGCCGGGCCTGT

      630        640        650        660        670        680        690
GACTGTGTTGAGGTCTATCTGCAGTCTAGTGGGCAGCGGGTCTTCAAGATGACATTCCACCACTCAATG

       700        710        720        730        740        750
ACCTTCAAGCAGATCGTGCTGGTTGGTCAGGAGACCCAGCGGGCTCTACTGCTCCTCACAGAGGAAGGA

760        770        780        790        800        810        820
AAGATCTACTCTTTGGTAGTGAATGAGACCCAGCTTGACCAGCCACGCTCCTACACGGTTCAGCTGGCC

830        840        850        860        870        880        890
CTGAGGAAGGTGTCCCACTACCTGCCTCACCTGCGCGTGGCCTGCATGACTTCCAACCAGAGCAGCACC

 900        910        920        930        940        950
CTCTACGTCACAGATCCTATTCTGTGCTCTTGGCTACAACCACCTTGGCCTGGTGGATGA
```

FIG. 19B

US 20040214760 A1

```
        10         20         30         40         50         60
RGGSEGRGRGREKRARGARRKRKQGGREARAADGEGGSGPGAEAGARTRPREEAEGGGSV

        70         80         90        100        110        120
EEGARGIIKGDEGSVGAGKEAQGRKYGKEEWRVRARRREGARPGRVQGQGGQVWAYIPGT

       130        140        150        160        170        180
GAAMAAAAREEEEEAARESAACPAAGPALWRLPEVLLLHMCSYLDMRALGRLAQVYRWLW

       190        200        210        220        230        240
HFTNCDLLRRQIAWASLNSGFTRLGTNLMTSVPVKVSQNWIVGCCREGILLKWRCSQMPW

       250        260        270        280        290        300
MQLEDDALYISQANFILAYQFRPDGASLNRQPLGVSAGHDEDVCHFVLATSHIVSAGGDG

       310        320        330        340        350        360
KIGLGKIHSTFAAKYWAHEQEVNCVDCKGGIISFGSRDRTAKVWPLASGQLGQCLYTIQT

       370        380        390        400        410        420
EDQIWSVAIRPLLSSFVTGTACCGHFSPLKIWDLNSGQLMTHLDRDFPPRAGVLDVIYES

       430        440        450        460        470        480
PFALLSCGYDTYVRYWDCRTSVRKCVMEWEEPHNSTLYCLQTDGNHLLATGSSFYSVVRL

       490        500        510        520        530
WDRHQRACPHTFPLTSTRLGSPVYCLHLTTKHLYAALSYNLHVLDIQNP*
```

FIG. 20A

20040247.020702

```
      10         20         30         40         50         60         70         80         90
CGAGGGGGAAGCGAAGGAAGGGGAAGAGGAAGGGAAAAGCGAGCGAGAGGGGCAAGGCGGAAGAGGAAGCAGGGCGGAAGGGAAGCCCGGGCCG

    100        110        120        130        140        150        160        170        180
CAGACGGCGAAGGAGGCAGCGGGCCGGGGGCTGAGGCGGGAGCGAGGACACGCCCAAGAGAGGAAGCAGAGGGAGGCGGAAGCGTGGAGGAAGG

190        200        210        220        230        240        250        260        270        280
GGCGAGAGGCATCATCAAAGGAGATGAGGGGAGCGTAGGGGCCGGGAAAGAGGCACAAGGAAGAAAGTATGGGAAGGAGGAATGGAGGGTCAGG

      290        300        310        320        330        340        350        360        370
GCTAGGCGGCGGGAGGGCGCCAGGCCGGGAAGAGTACAAGGACAAGGAGGTCAGGTTTGGGCCTACATCCCGGGGACAGGGGCGGCCATGGCGG

 380        390        400        410        420        430        440        450        460        470
CGGCAGCCAGGGAGGAGGAGGAGGAGGCGGCTCGGGAGTCAGCCGCCTGCCCGGCTGCGGGGCCAGCGCTCTGGCGCCTGCCGGAAGTGCTGCT

        480        490        500        510        520        530        540        550        560
GCTGCACATGTGCTCCTACCTCGACATGCCGGGCCCTCGGCCGCCTGGCCCAGGTGTACCGCTGGCTGTGGCACTTCACCAACTGCGACCTGCTC

    570        580        590        600        610        620        630        640        650
CGGCGCCAGATAGCCTGGGCCTCGCTCAACTCCGGCTTCACGCGGCTCGGCACCAACCTGATGACCAGTGTCCCAGTGAAGGTGTCTCAGAACT

660        670        680        690        700        710        720        730        740        750
GGATAGTGGGGTGCTGCCGAGAGGGGATTCTGCTGAAGTGGAGATGCAGTCAGATGCCCTGGATGCAGCTAGAGGATGATGCTTTGTACATATC

      760        770        780        790        800        810        820        830        840
CCAGGCTAATTTCATCCTGGCCTACCAGTTCCGTCCAGATGGTGCCAGCTTGAACCGTCAGCCTCTGGGAGTCTCTGCTGGGCATGATGAGGAC

 850        860        870        880        890        900        910        920        930        940
GTTTGCCACTTTGTGCTGGCCACCTCGCATATTGTCAGTGCAGGAGGAGATGGGAAGATTGGCCTTGGTAAGATTCACAGCACCTTCGCTGCCA

        950        960        970        980        990       1000       1010       1020       1030
AGTACTGGGCTCATGAACAGGAGGTGAACTGTGTGGATTGCAAAGGGGGCATCATATCATTTGGCTCCAGGGACAGGACGGCCAAGGTGTGGCC

  1040       1050       1060       1070       1080       1090       1100       1110       1120
TTTGGCCTCAGGCCAGCTGGGGCAGTGTTTATACACCATCCAGACTGAAGACCAAATCTGGTCTGTTGCTATCAGGCCATTACTCAGCTCTTTT

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
GTGACAGGGACGGCTTGTTGTGGGCACTTCTCACCCCTGAAAATCTGGGACCTCAACAGTGGGCAGCTGATGACACACTTGGACAGAGACTTTC

    1230       1240       1250       1260       1270       1280       1290       1300       1310
CCCCAAGGGCTGGGGTGCTGGATGTCATATATGAGTCCCCTTTCGCACTGCTCTCCTGTGGCTATGACACCTATGTTCGCTACTGGGACTGCCG

1320       1330       1340       1350       1360       1370       1380       1390       1400       1410
CACCAGTGTCCGGAAATGTGTCATGGAGTGGGAGGAGCCCCACAACAGCACCCTGTACTGCCTGCAGACAGATGGCAACCACTTGCTTGCCACA

      1420       1430       1440       1450       1460       1470       1480       1490       1500
GGTTCCTCCTTCTATAGCGTTGTACGGCTGTGGGACCGGCACCAAAGGGCCTGCCCGCACACCTTCCCGCTGACGTCGACCCGCCTCGGCAGCC

  1510       1520       1530       1540       1550       1560       1570       1580       1590
CTGTGTACTGCCTGCATCTCACCACCAAGCATCTCTATGCTGCGCTGTCTTACAACCTCCACGTCCTGGATATTCAAAACCCGTGA
```

FIG. 20B

20020724.0017

```
        10         20         30         40         50         60
LILTSVLLFQRHGYCTLGEAFNRLDFSSAIQDIRTFNYVVKLLQLIAKSQLTSLSGVAQK

        70         80         90        100        110        120
NYFNILDKIVQKVLDDHHNPRLIKDLLQDLSSTLCILIRGVGKSVLVGNININWICRLETI

       130        140        150        160        170        180
LAWQQQLQDLQMTKQVNNGLTLSDLPLHMLNNILYRFSDGWDIITLGQVTPTLYMLSEDR

       190        200        210        220        230        240
QLWKKLCQYHFAEKQFCRHLILSEKGHIEWKLMYFALQKHYPAKEQYGDTLHFCRHCSIL

       250        260        270
FWKDSGHPCTAADPDSCFTPVSPQHFIDLFKF
```

FIG. 21A

```
          10         20         30         40         50         60
GCATTGCTATAATTTTACTATACTCTCATCTAAATCTAAAATCAGTCTTCAAAATAAAAACAAATTGTC

 70         80         90        100        110        120        130
CTTTGCCAAAAATTTTTTTAATCGCACAATTAATTGACATTAACTGCCAATTCTTTTTGGCTAATTGAC

140        150        160        170        180        190        200
TAATTTTAACTTCTGTGTTGCTTTTCCAGAGGCATGGCTATTGCACCTTGGGAGAAGCCTTTAATCGGT

210        220        230        240        250        260        270
TAGACTTCTCAAGTGCAATTCAAGATATCCGAACGTTCAATTATGTGGTCAAACTGTTGCAGCTAATTG

 280        290        300        310        320        330        340
CAAAATCCCAGTTAACTTCATTGAGTGGCGTGGCACAGAAGAATTACTTCAACATTTTGGATAAAATCG

  350        360        370        380        390        400        410
TTCAAAAGGTTCTTGATGACCACCACAATCCTCGCTTAATCAAAGATCTTCTGCAAGACCTAAGCTCTA

    420        430        440        450        460        470        480
CCCTCTGCATTCTTATTAGAGGAGTAGGGAAGTCTGTATTAGTGGGAAACATCAATATTTGGATTTGCC

     490        500        510        520        530        540        550
GATTAGAAACTATTCTCGCCTGGCAACAACAGCTACAGGATCTTCAGATGACTAAGCAAGTGAACAATG

      560        570        580        590        600        610        620
GCCTCACCCTCAGTGACCTTCCTCTGCACATGCTGAACAACATCCTATACCGGTTCTCAGACGGATGGG

       630        640        650        660        670        680        690
ACATCATCACCTTAGGCCAGGTGACCCCCACGTTGTATATGCTTAGTGAAGACAGACAGCTGTGGAAGA

        700        710        720        730        740        750
AGCTTTGTCAGTACCATTTTGCTGAAAAGCAGTTTTGTAGACATTTGATCCTTTCAGAAAAAGGTCATA

760        770        780        790        800        810        820
TTGAATGGAAGTTGATGTACTTTGCACTTCAGAAACATTACCCAGCGAAGGAGCAGTACGGAGACACAC

830        840        850        860        870        880        890
TGCATTTCTGTCGGCACTGCAGCATTCTCTTTTGGAAGGACTCAGGACACCCCTGCACGGCGGCCGACC

900        910        920        930        940        950        960
CTGACAGCTGCTTCACGCCTGTGTCTCCGCAGCACTTCATCGACCTCTTCAAGTTTTAAGGGCTGCCCC

 970        980        990       1000       1010       1020       1030
TGCCATCCCTATTGGAGATTGTGAATCCTGCTGTCTGTGCAGGGCTCATAGTGAGTGTTCTGTGAGGTG

 1040       1050       1060       1070       1080       1090       1100
GGTGGAGACTCCTCGGAAGCCCCTGCTTCCAGAAAGCCTGGGAAGAACTGCCCTTCTGCAAAGGGGGGA

  1110       1120       1130       1140       1150       1160       1170
CTGCATGGTTGCATTTTCATCACTGAAAGTCAGAGGCCAAGGAAATCATTTCTACTTCTTTAAAAACTC

   1180       1190       1200       1210
CTTCTAAGCATATTAAAATGTGAAATTTTGCGTACTCTCTC
```

FIG. 21B

Docket #5914-090

20040247.010702

```
        10         20         30         40         50         60
YGSEGKGSSSISSDVSSSTDHTPTKAQKNVATSEDSDLSMRTLSTPSPALICPPNLPGFQ

        70         80         90        100        110        120
NGRGSSTSSSSITGETVAMVHSPPPTRLTHPLIRLASRPQKEQASIDRLPDHSMVQIFSF

       130        140        150        160        170        180
LPTNQLCRCARVCRRWYNLAWDPRLWRTIRLTGETINVDRALKVLTRRLCQDTPNVCLML

       190        200        210        220        230        240
ETVTVSGCRRLTDRGLYTIAQCCPELRRLEVSGCYNISNEAVFDVVSLCPNLEHLDVSGC

       250        260        270        280        290        300
SKVTCISLTREASIKLSPLHGKQISIRYLDMTDCFVLEDEGLHTIAAHCTQLTHLYLRRC

       310        320        330        340        350        360
VRLTDEGLRYLVIYCASIKELSVSDCRFVSDFGLREIAKLESRLRYLSIAHCGRVTDVGI

       370        380        390        400        410        420
RYVAKYCSKLRYLNARGCEGITDHGVEYLAKNCTKLKSLDIGKCPLVSDTGLECLALNCF

       430        440        450        460        470        480
NLKRLSLKSCESITGQGLQIVAANCFDLQTLNVQDCEVSVEALRFVKRHCKRCVIEHTNP

AFF
```

FIG. 22A

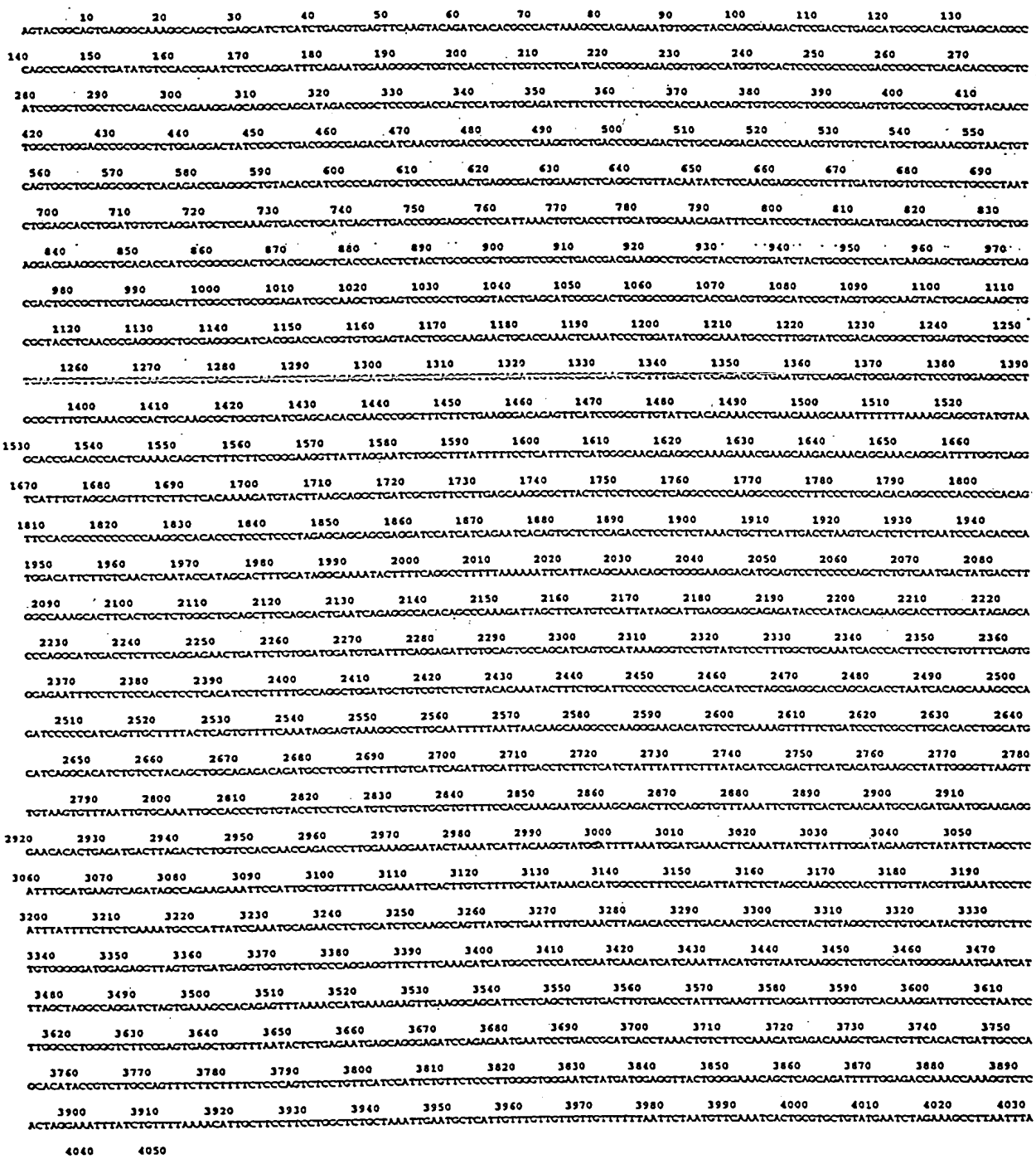

FIG. 22B

EP 0 742 270 A2

```
      10         20         30         40         50         60
AAAPAPAPAPTPTPEEGPDAGWGDRIPLEILVQIFGLLVAADGPMPFLGRAARVCRRWQE

      70         80         90        100        110        120
AASQPALWHTVTLSSPLVGRPAKGGVKAEKKLLASLEWLMPNRFSQLQRLTLIHWKSQVH

     130        140        150        160        170        180
PVLKLVGECCPRLTFLKLSGCHGVTADALVMLAKACCQLHSLDLQHSMVESTAVVSFLEE

     190        200        210        220        230        240
AGSRMRKLWLTYSSQTTAILGALLGSCCPQLQVLEVSTGINRNSIPLQLPVEALQKGCPQ

     250        260        270        280
LQVLRLLNLMWLPKPPGRGVAPGPGFPSLEELCLASSTCNFVS
```

FIG. 23A

EP 0 542 810 B1

```
          10         20         30         40         50         60
TGCGGCCGCGCCCGCACCCGCACCGGCACCCACGCCCACGCCCGAGGAAGGGCCCGACGCGGGCTGGGG

70         80         90        100        110        120        130
AGACCGCATTCCCTTGGAAATCCTGGTGCAGATTTTCGGGTTGTTGGTGGCGGCGGACGGCCCCATGCC

140        150        160        170        180        190        200
CTTCCTGGGCAGGGCTGCGCGCGTGTGCCGCCGCTGGCAGGAGGCCGCTTCCCAACCCGCGCTCTGGCA

210        220        230        240        250        260        270
CACCGTGACCCTGTCGTCCCCGCTGGTCGGCCGGCCTGCCAAGGGCGGGGTCAAGGCGGAGAAGAAGCT

 280        290        300        310        320        330        340
CCTTGCTTCCCTGGAGTGGCTTATGCCCAATCGGTTTTCACAGCTCCAGAGGCTGACCCTCATCCACTG

  350        360        370        380        390        400        410
GAAGTCTCAGGTACACCCCGTGTTGAAGCTGGTAGGTGAGTGCTGTCCTCGGCTCACTTTCCTCAAGCT

   420        430        440        450        460        470        480
CTCCGGCTGCCACGGTGTGACTGCTGACGCTCTGGTCATGCTAGCCAAAGCCTGCTGCCAGCTCCATAG

    490        500        510        520        530        540        550
CCTGGACCTACAGCACTCCATGGTGGAGTCCACAGCTGTGGTGAGCTTCTTGGAGGAGGCAGGGTCCCG

     560        570        580        590        600        610        620
AATGCGCAAGTTGTGGCTGACCTACAGCTCCCAGACGACAGCCATCCTGGGCGCATTGCTGGGCAGCTG

      630        640        650        660        670        680        690
CTGCCCCCAGCTCCAGGTCCTGGAGGTGAGCACCGGCATCAACCGTAATAGCATTCCCCTTCAGCTGCC

       700        710        720        730        740        750
TGTCGAGGCTCTGCAGAAAGGCTGCCCTCAGCTCCAGGTGCTGCGGCTGTTGAACCTGATGTGGCTGCC

760        770        780        790        800        810        820
CAAGCCTCCGGGACGAGGGGTGGCTCCCGGACCAGGCTTCCCTAGCCTAGAGGAGCTCTGCCTGGCGAG

830        840        850
CTCAACCTGCAACTTTGTGAGC
```

FIG. 23B

20020147.0040

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          10         20         30         40         50         60
QHCSQKDTAELLRGLSLWNHAEERQKFFKYSVDEKSDKEAEVSEHSTGITHLPPEVMLSI

          70         80         90        100        110        120
FSYLNPQELCRCSQVSMKWSQLTKTGSLWKHLYPVHWARGDWYSGPATELDTEPDDEWVK

         130        140        150        160        170        180
NRKDESRAFHEWDEDADIDESEESAEESIAISIAQMEKRLLHGLIHNVLPYVGTSVKTLV

         190        200        210        220        230        240
LAYSSAVSSKMVRQILELCPNLEHLDLTQTDISDSAFDSWSWLGCCQSLRHLDLSGCEKI

         250        260        270        280        290        300
TDVALEKISRALGILTSHQSGFLKTSTSKITSTAWKNKDITMQSTKQYACLHDLTNKGIG

         310        320        330        340        350        360
EEIDNEHPWTKPVSSENFTSPYVWMLDAEDLADIEDTVEWRHRNVESLCVMETASNFSCS

         370        380        390        400        410        420
TSGCFSKDIVGLRTSVCWQQHCASPAFAYCGHSFCCTGTALRTMSSLPESSAMCRKAART

         430        440        450        460        470        480
RLPRGKDLIYFGSEKSDQETGRVLLFLSLSGCYQITDHGLRVLTLGGGLPYLEHLNLSGC

         490        500        510        520        530        540
LTITGAGLQDLVSACPSLNDEYFYYCDNINGPHADTASGCQNLQCGFRACCRSGE*PLTS

         550        560        570        580        590
DLCLLHLAEQAFFHALYS*HISCVNHPFLSVTCFGPIXYNFRNLNYQXIVML
```

FIG. 24A

09/976,074 Docket: 5914-090

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          10         20         30         40         50         60         70         80         90
ACAACACTGCTCTCAGAAGGATACTGCAGAACTCCTTAGAGGTCTTAGCCTATGGAATCATGCTGAAGAGCGACAGAARTTTTTTAAATATTCC

     100        110        120        130        140        150        160        170        180
GTGGATGAAAAGTCAGATAAAGAAGCAGAAGTGTCAGAACACTCCACAGGTATAACCCATCTTCCTCCTGAGGTAATGCTGTCAATTTTCAGCT

190        200        210        220        230        240        250        260        270        280
ATCTTAATCCTCAAGAGTTATGTCGATGCAGTCAAGTAAGCATGAAATGGTCTCAGCTGACAAAAACGGGATCGCTTTGGAAACATCTTTACCC

      290        300        310        320        330        340        350        360        370
TGTTCATTGGGCCAGAGGTGACTGGTATAGTGGTCCCGCAACTGAACTTGATACTGAACCTGATGATGAATGGGTGAAAAATAGGAAAGATGAA

 380        390        400        410        420        430        440        450        460        470
AGTCGTGCTTTTCATGAGTGGGATGAAGATCCTGACATTGATGAATCTGAAGAGTCTGCGGAGGAATCAATTGCTATCAGCATTGCACAAATGG

         480        490        500        510        520        530        540        550        560
AAAAACGTTTACTCCATGGCTTAATTCATAACGTTCTACCATATGTTGGTACTTCTGTAAAAACCTTAGTATTAGCATACAGCTCTGCAGTTTC

    570        580        590        600        610        620        630        640        650
CAGCAAAATGGTTAGGCAGATTTTAGAGCTTTGTCCTAACCTGGAGCATCTGGATCTTACCCAGACTGACATTTCAGATTCTGCATTTGACAGT

660        670        680        690        700        710        720        730        740        750
TGGTCTTGGCTTGGTTGCTGCCAGAGTCTTCGGCATCTTGATCTGTCTGGTTGTGAGAAAATCACAGATGTGGCCCTAGAGAAGATTTCCAGAG

      760        770        780        790        800        810        820        830        840
CTCTTGGAATTCTGACATCTCATCAAAGTGGCTTTTTGAAAACATCTACAAGCAAAATTACTTCAACTGCGTGGAAAAATAAAGACATTACCAT

 850        860        870        880        890        900        910        920        930        940
GCAGTCCACCAAGCAGTATGCCTGTTTGCACGATTTAACTAACAAGGGCATTGGAGAAGAAATAGATAATGAACACCCCTGGACTAAGCCTGTT

         950        960        970        980        990       1000       1010       1020       1030
TCTTCTGAGAATTTCACTTCTCCTTATGTGTGGATGTTAGATGCTGAAGATTTGGCTGATATTGAAGATACTGTGGAATGGAGACATAGAAATG

    1040       1050       1060       1070       1080       1090       1100       1110       1120
TTGAAAGTCTTTGTGTAATGGAAACAGCATCCAACTTTAGTTGTTCCACCTCTGGTTGTTTTAGTAAGGACATTGTTGGACTAAGGACTAGTGT

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
CTGTTGGCAGCAGCATTGTGCTTCTCCAGCCTTTGCGTATTGTGGTCACTCATTTTGTTGTACAGGAACAGCTTTAAGAACTATGTCATCACTC

      1230       1240       1250       1260       1270       1280       1290       1300       1310
CCAGAATCTTCTGCAATGTGTAGAAAAGCAGCAAGGACTAGATTGCCTAGGGGAAAAGACTTAATTTACTTTGGGAGTGAAAAATCTGATCAAG

 1320       1330       1340       1350       1360       1370       1380       1390       1400       1410
AGACTGGACGTGTACTTCTGTTTCTCAGTTTATCTGGATGTTATCAGATCACAGACCATGGTCTCAGGGTTTTGACTCTGGGAGGAGGGCTGCC

         1420       1430       1440       1450       1460       1470       1480       1490       1500
TTATTTGGAGCACCTTAATCTCTCTGGTTGTCTTACTATAACTGGTGCAGGCCTGCAGGATTTGGTTTCAGCATGTCCTTCTCTGAATGATGAA

    1510       1520       1530       1540       1550       1560       1570       1580       1590
TACTTTTACTACTGTGACAACATTAACGGTCCTCATGCTGATACCGCCAGTGGATGCCAGAATTTGCAGTGTGGTTTTCGAGCCTGCTGCCGCT

1600       1610       1620       1630       1640       1650       1660       1670       1680       1690
CTGGCGAATGACCCTTGACTTCTGATCTTTGTCTACTTCATTTAGCTGAGCAGGCTTTCTTTCATGCACTTTACTCATAGCACATTTCTTGTGT

      1700       1710       1720       1730       1740       1750       1760       1770
TAACCATCCCTTTTTGAGCGTGACTTGTTTTGGGCCCATTNYTTACAACTTCAGAAATCTTAATTACCAGTGRATTGTAATGTTG
```

FIG. 24B

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        10         20         30         40         50         60
RVTSGCGLARGSSAMVFSNNDEGLINKKLPKELLLRIFSFLDIVTLCRCAQISKAWNILA

        70         80         90        100        110        120
LDGSNWQRIDLFNFQIDVEGRVVENISKRCVGFLRKLSLRGCIGVGDSSLKTFAQNCRNI

       130        140        150        160        170        180
EHLNLNGCTKITDSTCYSLSRFCSKLKHLXLTSCVSITNSSLKGISEGCRNLEYLNLSWC

       190        200        210        220        230        240
DQITKDGIEALVRGCRGLKALLLRGCTQLEDEALKHIQNYCHELVSLNLQSCSRITDEGV

       250        260        270        280        290        300
VQICRGCHRLQALCLSGCSNLTDASLTALGLNCPRLQILEAARCSHLTDAGFTLLARNCH

       310        320        330        340        350        360
ELEKMDLEXCILITDSTLIQLSIHCPKLQALSLSHCELIXDDGILHLSNSTCGHERLRVL

       370        380        390        400        410        420
ELDNCLLITDVALXHLENCRGLERLELYDCQQVTRAGIKRMRAQLPHVKVHAYFAPVTPP

       430        440        450        460        470        480
TAVAGSGQRLCRCCVIL*QQLPGPKG**GILSSRRPESS*PTPPSPNLLILHWERHLQFP

       490        500        510        520        530        540
NRHLSRFKNGEDKKGFISNI*HHIVT*NMALT*LVLLLPSSLMSSLTSTHLLL*YL*RLI

       550
ILKTDQTGPASKYINCVQ*
```

FIG. 25A

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        10         20         30         40         50         60         70         80         90
TTTTACTGTACACAGTTGATGTATTTTGATGCTGGGCCTGTCTGGTCTGTCTTGAGGATTATTAACCTTTAGAGGTATCAGAGAAGCAAATGGG

   100        110        120        130        140        150        160        170        180
TACTGGTGAGGCTGCTCATTAGGGAAGAGGGCAAAAGGAGCACTAGCTAGGTCAGAGCCATGTTTCAGGTCACAATGTGATGTCAGATGTTGCT

190        200        210        220        230        240        250        260        270        280
TATAAATCCTTTCTTGTCTTCGCCATTCTTAAATCTTGATAGGTGCCTGTTGGGAAACTGTAAATGCCTTTCCCAATGGAGAATCAACAGATTG

      290        300        310        320        330        340        350        360        370
GGTGATGGTGGAGTCGGTCAGGAAGACTCAGGTCTTCTAGAGGAAAGGATGCCTCATCACCCCTTNGGCCCAGGCAGCTGCTGTCAGAGAATGA

  380        390        400        410        420        430        440        450        460        470
CACAGCACCTGCACAGTCGCTGTCCACTTCCTGCCACTGCTGTCGGTGGGGTGACGGGAGCAAAGTAGGCGTGCACTTTGACATGAGGGAGCTG

        480        490        500        510        520        530        540        550        560
AGCCCGCATCCGCTTGATGCCTGCACGGGTAACCTGCTGGCAGTCGTACAGCTCGAGGCGCTCCAGGCCTCGGCAGTTCTCTAGGTGTYCCAGG

    570        580        590        600        610        620        630        640        650
GCCACATCAGTGATGAGGAGGCAGTTGTCCAACTCCAGTACCCGCAGCCTCTCATGGCCACAGGTACTGTTGCTCAGGTGCAGGATCCCATCAT

660        670        680        690        700        710        720        730        740        750
CTGKGATGAGTTCACAGTGGGACAGGCTCAGGGCTTGCAGTTTAGGACAGTGAATGGAGAGCTGGATGAGTGTGCTGTCGGTTATCAGGATGCA

      760        770        780        790        800        810        820        830        840
WTCTTCAAGATCCATCTTCTCCAATTCGTGGCAATTCCGAGCTAAAAGTGTAAAACCTGCGTCAGTCAAATGGGAGCATCGGGCAGCCTCCAAA

  850        860        870        880        890        900        910        920        930        940
ATTTGCAGTCGCGGACAGTTCAAACCCAGGGCTGTAAGAGAGGCATCTGTGAGGTTGCTGCAACCCGAAAGGCAGAGAGCCTGTAGCCGGTGAC

        950        960        970        980        990       1000       1010       1020       1030
AGCCCCTGCATATCTGCACCACACCTTCATCCGTGATACGTGAGCAGGACTGCAAGTTGAGGCTCACAAGCTCATGGCAGTAATTCTGAATGTG

   1040       1050       1060       1070       1080       1090       1100       1110       1120
TTTCAGAGCTTCATCTTCTAACTGTGTGCAGCCCCTCAGGAGCAGGGCTTTCAGGCCTCGACAACCTCGCACCAGTGCCTCGATGCCATCCTTC

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
GTGATCTGATCACACCAAGAGAGGTTCAGGTACTCCAGGTTTCGGCAGCCCTCACTGATCCCCTTCAAGGAGCTGTTTGTAATAGACACACAGG

     1230       1240       1250       1260       1270       1280       1290       1300       1310
AGGTCAGAWCCAGATGTTTCAGCTTGGAACAGAATCTGCTAAGGCTATAACACGTGCTGTCAGTGATTTTTGTGCATCCATTGAGGTTCAAATG

  1320       1330       1340       1350       1360       1370       1380       1390       1400       1410
TTCAATGTTTCGGCAGTTCTGTGCAAAGGTCTTCAAGGAGGAATCCCCAACACCAATGCAGCCTCGCAAGCTGAGCTTCCTCAGGAATCCAACG

        1420       1430       1440       1450       1460       1470       1480       1490       1500
CATCGCTTCGAGATATTTTCCACCACTCGACCCTCTACATCTATTTGAAAGTTAAAAAGATCTATTCTTTGCCAGTTGCTTCCATCCAGGGCTA

   1510       1520       1530       1540       1550       1560       1570       1580       1590
AGATGTTCCAAGCCTTGGAAATCTGTGCACATCGGCACAAAGTTACTATATCCAAGAAGGAAAATATTCTTAACAGAAGTTCTTTGGGTAACTT

1600       1610       1620       1630       1640       1650       1660       1670       1680
TTTGTTAATAAGGCCTTCATCATTGTTTGAGAAAACCATGGCCGAAGAGCCGCGAGCGAGCCCACAGCCCGAAGTCACACGGC
```

FIG. 25B

20040247.040702

```
        10         20         30         40         50         60
MSPVFPMLTVLTMFYYICLRRRARTATRGEMMNTHRAIESNSQTSPLNAEVVQYAKEVVD

        70         80         90        100        110        120
FSSHYGSENSMSYTMWNLAGVPNVFPSSGDFTQTAVFRTYGTWWDQCPSASLPFKRTPPN

       130        140        150        160        170        180
FQSQDYVELTFEQQVVPTAVHVLETYHPGAVIRILACSANPYSPNPPAEVRWEILWSERP

       190        200        210        220        230        240
TKVNASQARQFKPCIKQINFPTNLIRLEVNSSLLEYYTELDAVVLHGVKDKPVLSLKTSL

       250        260        270        280        290        300
IDMNDIEDDAYAEKDGCGMDSLNKKFSSAVLGEGPNNGYFDKLPYELIQLILNHLTLPDL

       310        320        330        340        350        360
CRLAQTCKLLSQHCCDPLQYIHLNLQPYWAKLDDTSLEFLQSRCTLVQWLNLSWTGNRGF

       370        380        390        400        410        420
ISVAGFSRFLKVCGSELVRLELSCSHFLNETCLEVISEMCPNLQALNLSSCDKLPPQAFN

       430        440        450        460        470        480
HIAKLCSLKRLVLYRTKVEQTALLSILNFCSELQHLSLGSCVMIEDYDVIASMIGAKCKK

       490        500        510        520        530        540
LRTLDLWRCKNITENGIAELASGCPLLEELDLGWCPTLQSSTGCFTRLAHQLPNLQKLFL

       550        560        570        580        590        600
TANRSVCDTDIDELACNCTRLQQLDILGTRMVSPASLRKLLESCKDLSLLDVSFCSQIDN

       610        620
RAVLELNASFPKVFIKKSFTQ
```

FIG. 26A

```
        10         20         30         40         50         60         70         80         90
ATGTCACCGGTCTTTCCCATGTTAACAGTTCTGACCATGTTTTATTATATATGCCTTCGGCGCCGAGCCAGGACAGCTACAAGAGGAGAAATGA

    100        110        120        130        140        150        160        170        180
TGAACACCCATAGAGCTATAGAATCAAACAGCCAGACTTCCCCTCTCAATGCAGAGGTAGTCCAGTATGCCAAAGAAGTAGTGGATTTCAGTTC

190        200        210        220        230        240        250        260        270        280
CCATTATGGAAGTGAGAATAGTATGTCCTATACTATGTGGAATTTGGCTGGTGTACCAAATGTATTCCCAAGTTCTGGTGACTTTACTCAGACA

     290        300        310        320        330        340        350        360        370
GCTGTGTTTCGAACTTATGGGACATGGTGGGATCAGTGTCCTAGTGCTTCCTTGCCATTCAAGAGGACGCCACCTAATTTTCAGAGCCAGGACT

 380        390        400        410        420        430        440        450        460        470
ATGTGGAACTTACTTTTGAACAACAGGTGTATCCTACAGCTGTACATGTTCTAGAAACCTATCATCCCGGAGCAGTCATTAGAATTCTCGCTTG

        480        490        500        510        520        530        540        550        560
TTCTGCAAATCCTTATTCCCCAAATCCACCAGCTGAAGTAAGATGGGAGATTCTTTGGTCAGAGAGACCTACGAAGGTGAATGCTTCCCAAGCT

    570        580        590        600        610        620        630        640        650
CGCCAGTTTAAACCTTGTATTAAGCAGATAAATTTCCCCACAAATCTTATACGACTGGAAGTAAATAGTTCTCTTCTGGAATATTACACTGAAT

660        670        680        690        700        710        720        730        740        750
TAGATGCAGTTGTGCTACATGGTGTGAAGGACAAGCCAGTGCTTTCTCTCAAGACTTCACTTATTGACATGAATGATATAGAAGATGATGCCTA

     760        770        780        790        800        810        820        830        840
TGCAGAAAAGGATGGTTGTGGAATGGACAGTCTTAACAAAAAGTTTAGCAGTGCTGTCCTCGGGGAAGGGCCAAATAATGGGTATTTTGATAAA

 850        860        870        880        890        900        910        920        930        940
CTACCTTATGAGCTTATTCAGCTGATTCTGAATCATCTTACACTACCAGACCTGTGTAGATTAGCACAGACTTGCAAACTACTGAGCCAGCATT

        950        960        970        980        990       1000       1010       1020       1030
GCTGTGATCCTCTGCAATACATCCACCTCAATCTGCAACCATACTGGGCAAAACTAGATGACACTTCTCTGGAATTTCTACAGTCTCGCTGCAC

   1040       1050       1060       1070       1080       1090       1100       1110       1120
TCTTGTCCAGTGGCTTAATTTATCTTGGACTGGCAATAGAGGCTTCATCTCTGTTGCAGGATTTAGCAGGTTTCTGAAGGTTTGTGGATCCGAA

1130       1140       1150       1160       1170       1180       1190       1200       1210       1220
TTAGTACGCCTTGAATTGTCTTGCAGCCACTTTCTTAATGAAACTTGCTTAGAAGTTATTTCTGAGATGTGTCCAAATCTACAGGCCTTAAATC

    1230       1240       1250       1260       1270       1280       1290       1300       1310
TCTCCTCCTGTGATAAGCTACCACCTCAAGCTTTCAACCACATTGCCAAGTTATGCAGCCTTAAACGACTTGTTCTCTATCGAACAAAAGTAGA

1320       1330       1340       1350       1360       1370       1380       1390       1400       1410
GCAAACAGCACTGCTCAGCATTTTGAACTTCTGTTCAGAGCTTCAGCACCTCAGTTTAGGCAGTTGTGTCATGATTGAAGACTATGATGTGATA

      1420       1430       1440       1450       1460       1470       1480       1490       1500
GCTAGCATGATAGGAGCCAAGTGTAAAAAACTCCGGACCCTGGATCTGTGGAGATGTAAGAATATTACTGAGAATGGAATAGCAGAACTGGCTT

  1510       1520       1530       1540       1550       1560       1570       1580       1590
CTGGGTGTCCACTACTGGAGGAGCTTGACCTTGGCTGGTGCCCAACTCTGCAGAGCAGCACCGGGTGCTTCACCAGACTGGCACACCAGCTCCC

1600       1610       1620       1630       1640       1650       1660       1670       1680       1690
AAACTTGCAAAAACTCTTTCTTACAGCTAATAGATCTGTGTGTGACACAGACATTGATGAATTGGCATGTAATTGTACCAGGTTACAGCAGCTG

    1700       1710       1720       1730       1740       1750       1760       1770       1780
GACATATTAGGAACAAGAATGGTAAGTCCGGCATCCTTAAGAAAACTCCTGGAATCTTGTAAAGATCTTTCTTTACTTGATGTGTCCTTCTGTT

1790       1800       1810       1820       1830       1840       1850       1860
CGCAGATTGATAACAGAGCTGTGCTAGAACTGAATGCAAGCTTTCCAAAAGTGTTCATAAAAAAGAGCTTTACTCAGTGA
```

FIG. 26B

US 6,004,744 Dec 21, 1999

attorney docket no.

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        10         20         30         40         50         60
MQLVPDIEFKITYTRSPDGDGVGNSYIEDNDDDSKMADLLSYFQQQLTFQESVLKLCQPE

        70         80         90        100        110        120
LESSQIHISVLPMEVLMYIFRWVVSSDLDLRSLEQLSLVCRGFYICARDPEIWRLACLKV

       130        140        150        160        170        180
WGRSCIKLVPYTSWREMFLERPRVRFDGVYISKTTYIRQGEQSLDGFYRAWHQVEYYRYI

       190        200        210        220        230        240
RFFPDGHVMMLTTPEEPQSIVPRLRTRNTRTDAILLGHYRLSQDTDNQTKVFAVITKKKE

       250        260        270        280        290        300
EKPLDYKYRYFRRVPVQEADQSFHVGLQLCSSGHQRFNKLIWIHHSCHITYKSTGETAVS

       310        320
AFEIDKMYTPLFFARVRSYTAFSERPL
```

FIG. 27A

```
          10         20         30         40         50         60
ATGCAACTTGTACCTGATATAGAGTTCAAGATTACTTATACCCGGTCTCCAGATGGTGATGGCGTTGGA

 70         80         90        100        110        120        130
AACAGCTACATTGAAGATAATGATGATGACAGCAAAATGGCAGATCTCTTGTCCTACTTCCAGCAGCAA

140        150        160        170        180        190        200
CTCACATTTCAGGAGTCTGTGCTTAAACTGTGTCAGCCTGAGCTTGAGAGCAGTCAGATTCACATATCA

210        220        230        240        250        260        270
GTGCTGCCAATGGAGGTCCTGATGTACATCTTCCGATGGGTGGTGTCTAGTGACTTGGACCTCAGATCA

 280        290        300        310        320        330        340
TTGGAGCAGTTGTCGCTGGTGTGCAGAGGATTCTACATCTGTGCCAGAGACCCTGAAATATGGCGTCTG

 350        360        370        380        390        400        410
GCCTGCTTGAAAGTTTGGGGCAGAAGCTGTATTAAACTTGTTCCGTACACGTCCTGGAGAGAGATGTTT

 420        430        440        450        460        470        480
TTAGAACGGCCTCGTGTTCGGTTTGATGGCGTGTATATCAGTAAAACCACATATATTCGTCAAGGGGAA

 490        500        510        520        530        540        550
CAGTCTCTTGATGGTTTCTATAGAGCCTGGCACCAAGTGGAATATTACAGGTACATAAGATTCTTTCCT

 560        570        580        590        600        610        620
GATGGCCATGTGATGATGTTGACAACCCCTGAAGAGCCTCAGTCCATTGTTCCACGTTTAAGAACTAGG

 630        640        650        660        670        680        690
AATACCAGGACTGATGCAATTCTACTGGGTCACTATCGCTTGTCACAAGACACAGACAATCAGACCAAA

 700        710        720        730        740        750
GTATTTGCTGTAATAACTAAGAAAAAAGAAGAAAAACCACTTGACTATAAATACAGATATTTTCGTCGT

760        770        780        790        800        810        820
GTCCCTGTACAAGAAGCAGATCAGAGTTTTCATGTGGGGCTACAGCTATGTTCCAGTGGTCACCAGAGG

830        840        850        860        870        880        890
TTCAACAAACTCATCTGGATACATCATTCTTGTCACATTACTTACAAATCAACTGGTGAGACTGCAGTC

 900        910        920        930        940        950        960
AGTGCTTTTGAGATTGACAAGATGTACACCCCCTTGTTCTTCGCCAGAGTAAGGAGCTACACAGCTTTC

 970        980
TCAGAAAGGCCTCTGTAG
```

FIG. 27B

10045245 - 040902

EP 1042447 B1 20070502

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        10         20         30         40         50         60
AALDPDLENDDFFVRKTGAFHANPYVLRAFEDFRKFSEQDDSVERDIILQCREGELVLPD

        70         80         90        100        110        120
LEKDDMIVRRIPAQKKEVPLSGAPDRYHPVPFPEPWTLPPEIQAKFLCVLERTCPSKEKS

       130        140        150        160        170        180
NSCRILVPSYRQKKDDMLTRKIQSWKLGTTVPPISFTPGPCSEADLKRWEAIREASRLRH

       190        200        210        220        230        240
KKRLMVERLFQKIYGENGSKSMSDVSAEDVQNLRQLRYEEMQKIKSQLKEQDQKWQDDLA

       250
KWKDRRKSYTSDLQK
```

FIG. 28A

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          10         20         30         40         50         60
GCAGCCCTGGATCCTGACTTAGAGAATGATGATTTCTTTGTCAGAAAGACTGGGGCTTTCCATGCAAAT

70         80         90        100        110        120        130
CCATATGTTCTCCGAGCTTTTGAAGACTTTAGAAAGTTCTCTGAGCAAGATGATTCTGTAGAGCGAGAT

140        150        160        170        180        190        200
ATAATTTTACAGTGTAGAGAAGGTGAACTTGTACTTCCGGATTTGGAAAAAGATGATATGATTGTTCGC

210        220        230        240        250        260        270
CGAATCCCAGCACAGAAGAAAGAAGTGCCGCTGTCTGGGGCCCCAGATAGATACCACCCAGTCCCTTTT

 280        290        300        310        320        330        340
CCCGAACCCTGGACTCTTCCTCCAGAAATTCAAGCAAAATTTCTCTGTGTACTTGAAAGGACATGCCCA

  350        360        370        380        390        400        410
TCCAAAGAAAAAAGTAATAGCTGTAGAATATTAGTTCCTTCATATCGGCAGAAGAAAGATGACATGCTG

   420        430        440        450        460        470        480
ACACGTAAGATTCAGTCCTGGAAACTGGGAACTACCGTGCCTCCCATCAGTTTCACNCCTGGCCCCTGC

    490        500        510        520        530        540        550
AGTGAGGCTGACTTGAAGAGATGGGAGGCCATCCGGGAGGCCAGCAGACTCAGGCACAAGAAAAGGCTG

     560        570        580        590        600        610        620
ATGGTGGAGAGACTCTTTCAAAAGATTTATGGTGAGAATGGGAGTAAGTCCATGAGTGATGTCAGCGCA

      630        640        650        660        670        680        690
GAAGATGTTCAAAACTTGCGTCAGCTGCGTTACGAGGAGATGCAGAAAATAAAATCACAATTAAAAGAA

        700        710        720        730        740        750
CAAGATCAGAAATGGCAGGATGACCTTGCAAAATGGAAAGATCGTCGAAAAAGTTACACTTCAGATCTG

760
CAGAAG
```

FIG. 28B

20040147.070702

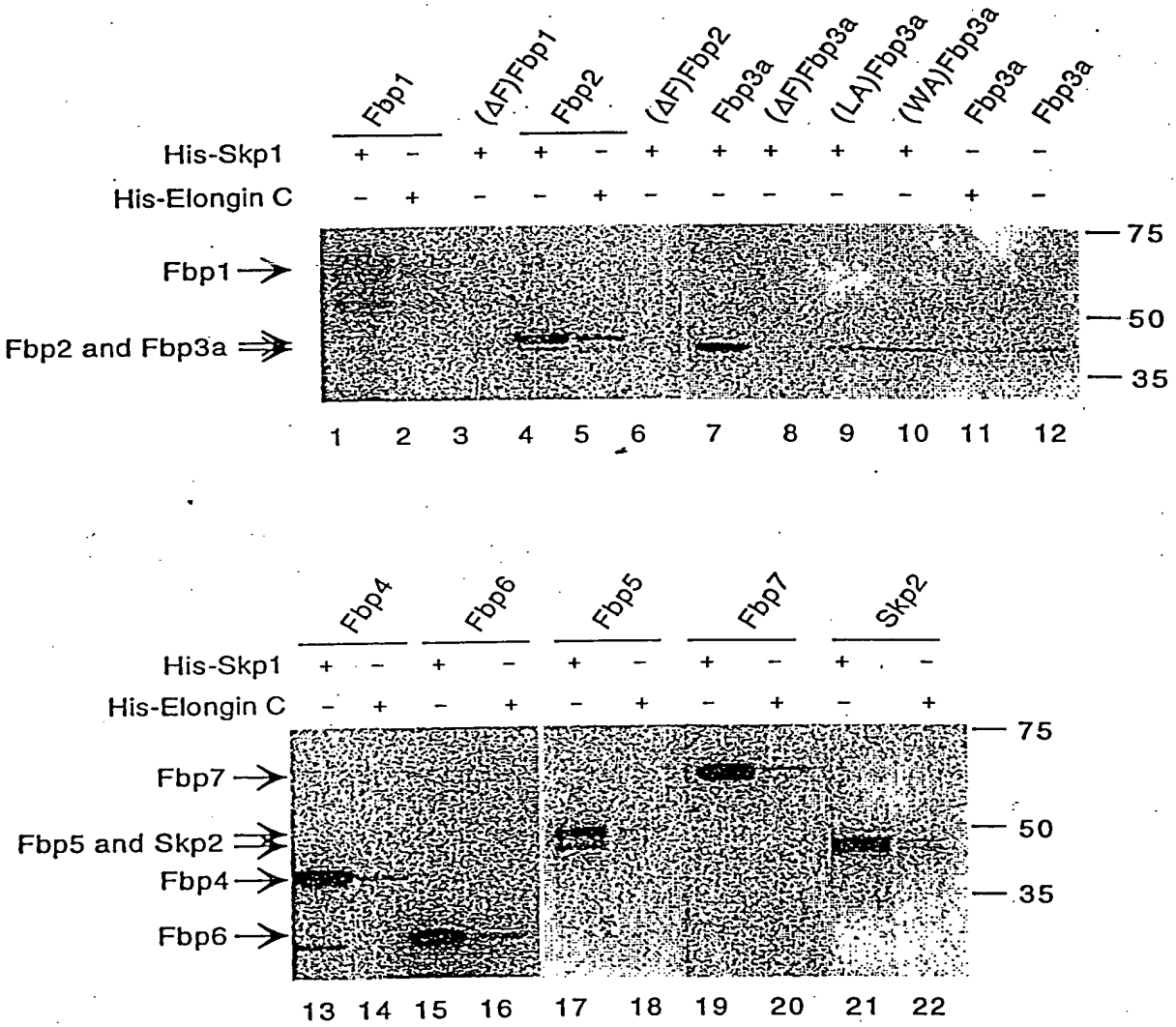


FIG. 29

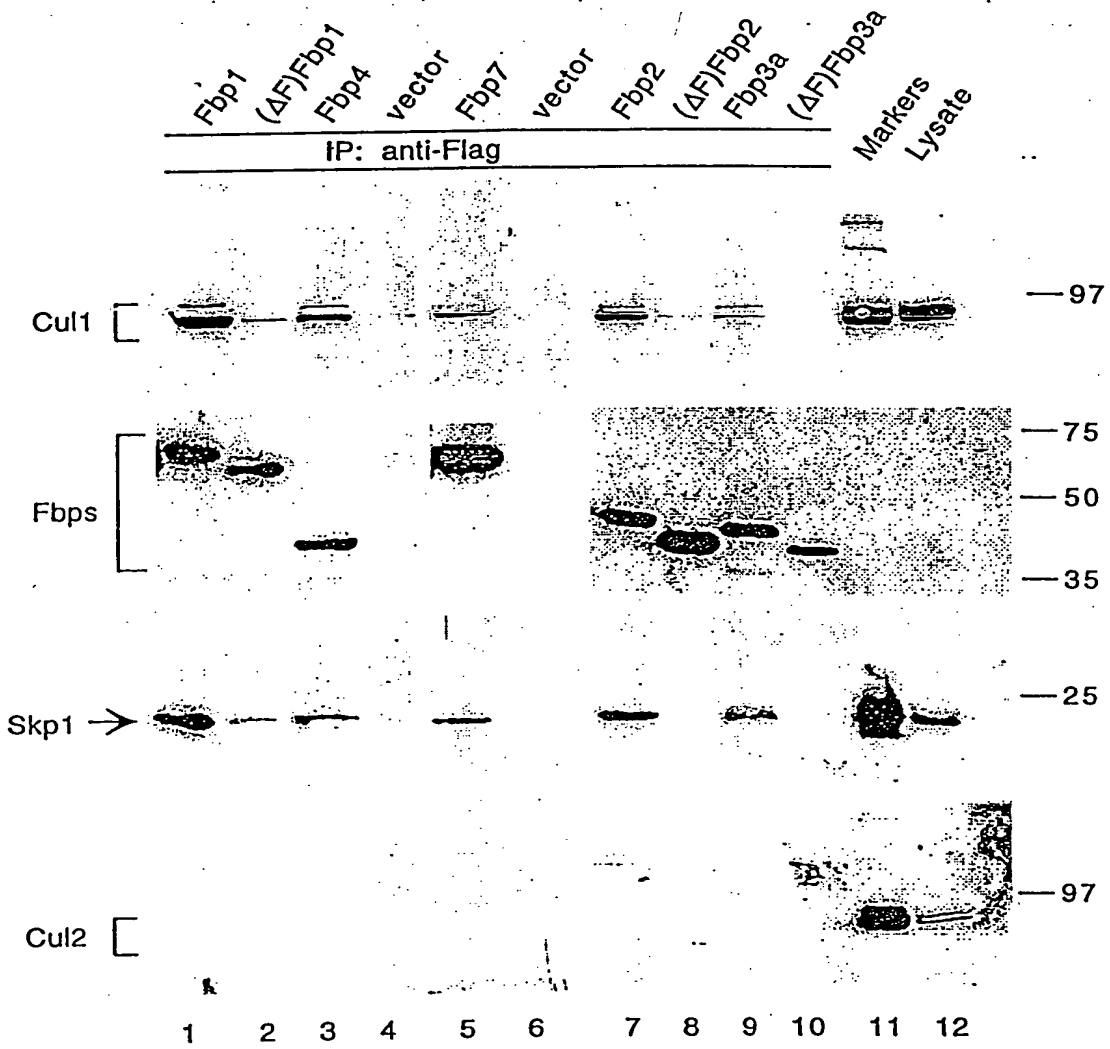


FIG. 30

20070247.0470702

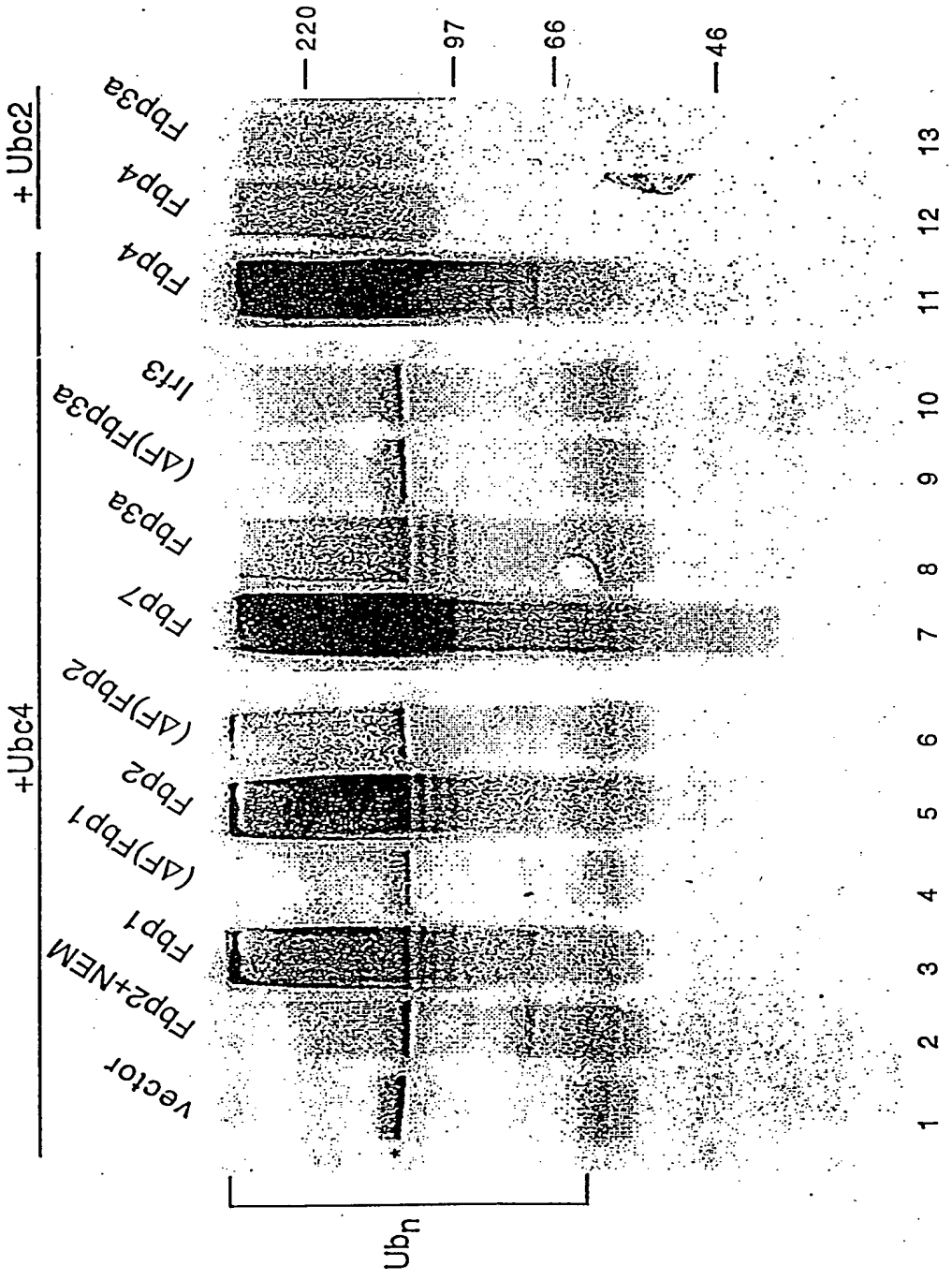


FIG. 31

20040217.010702

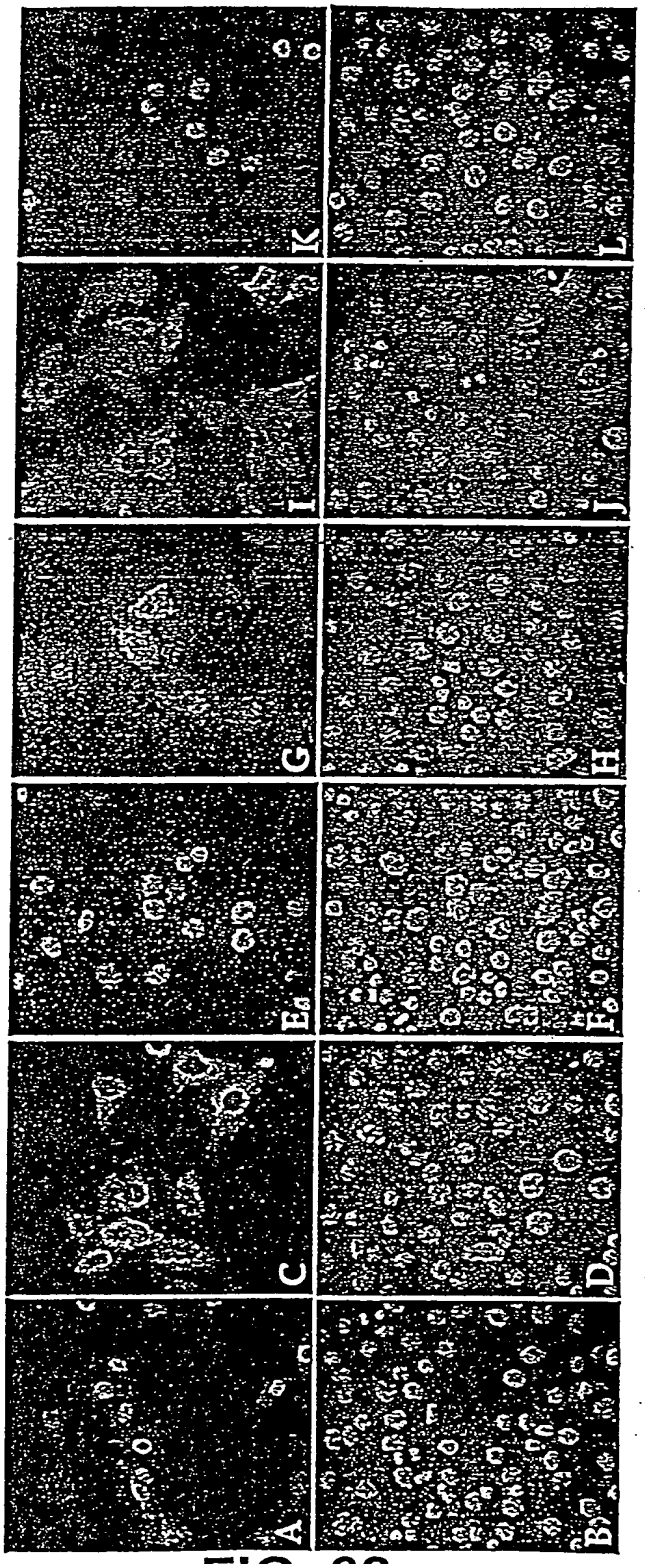


FIG. 32

20070047+004

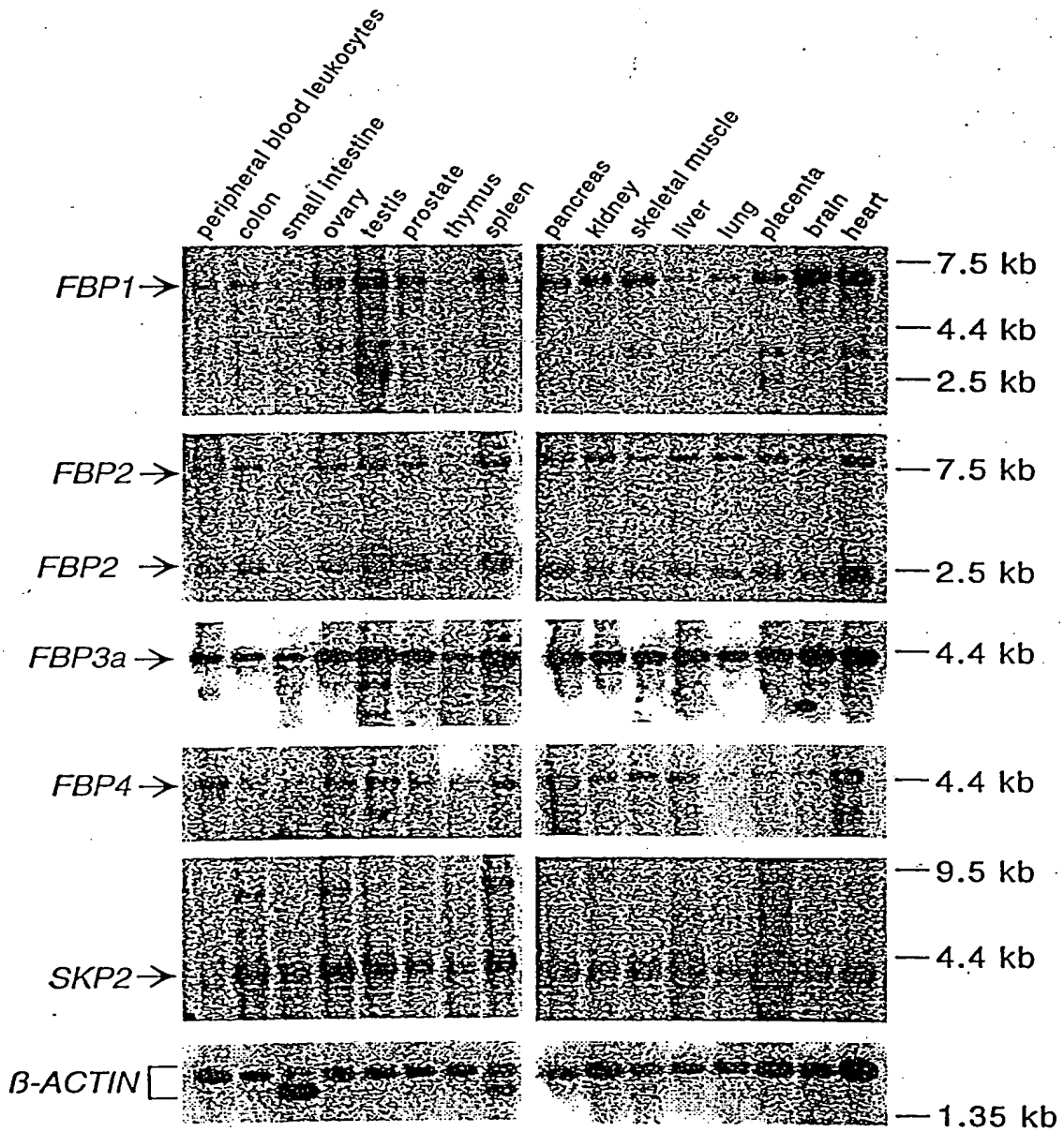


FIG. 33

20040247 · 040702

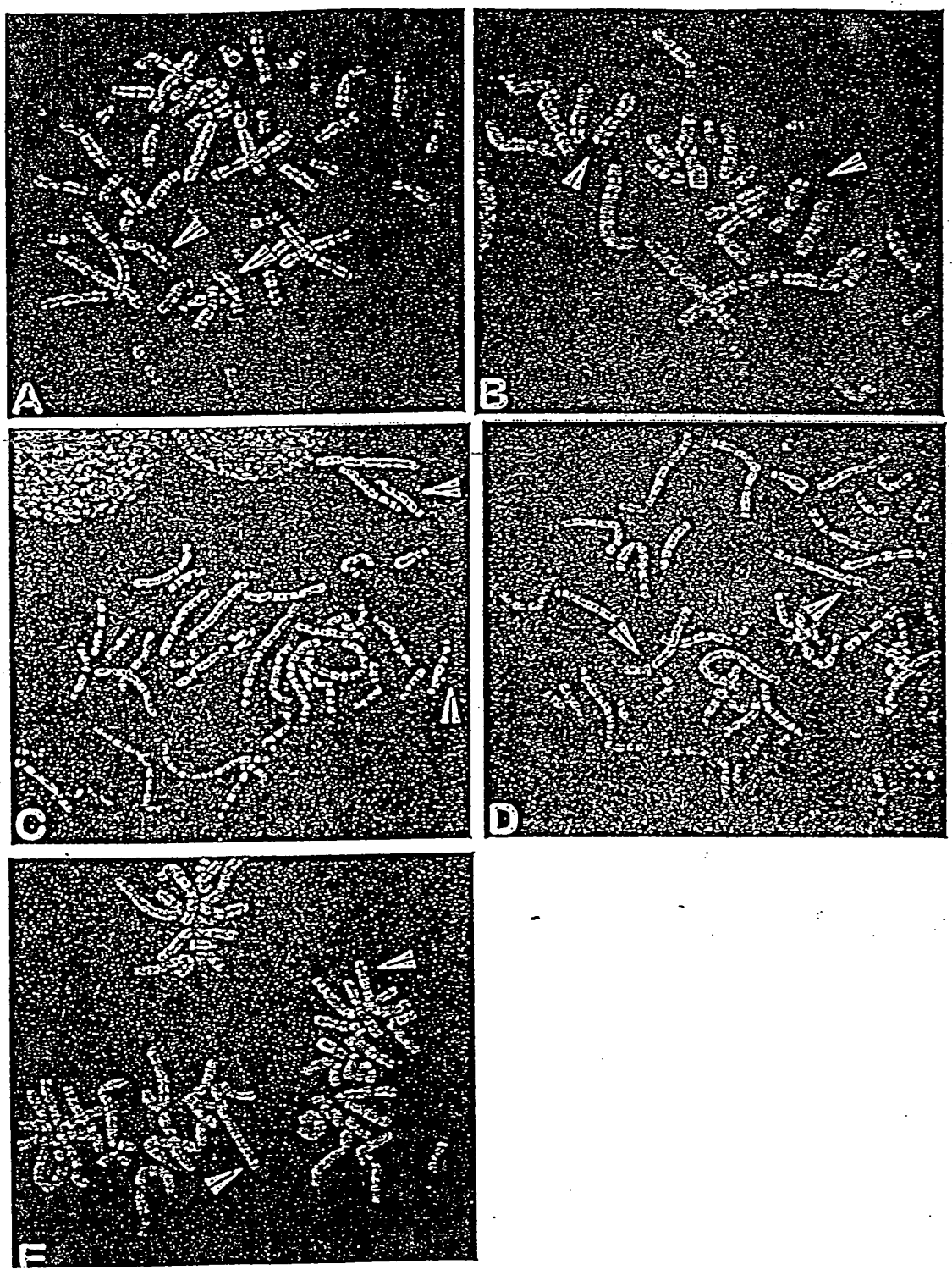


FIG. 34 A-E

20070047417

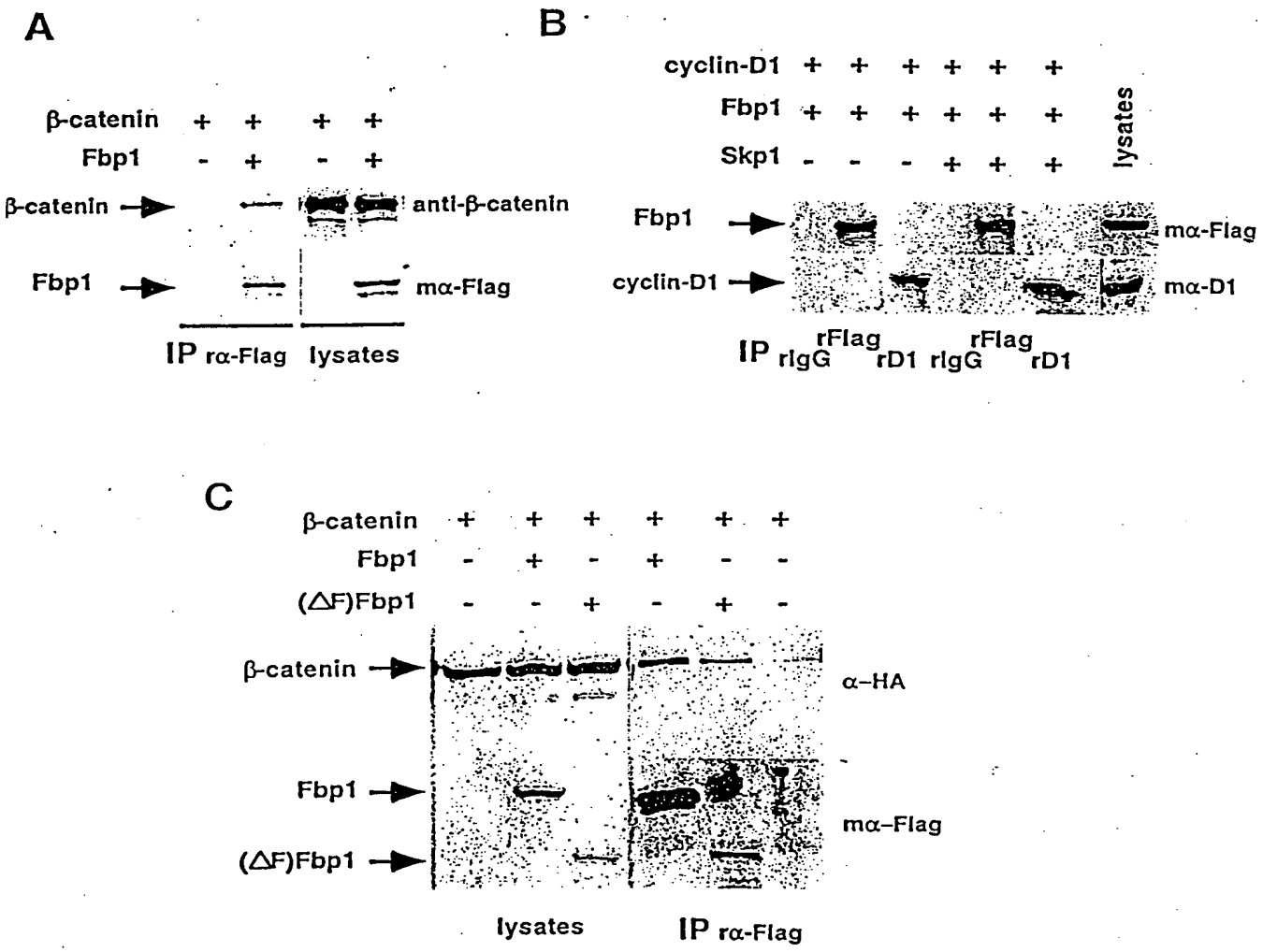


FIG. 35 A-C

20070243 .070702

20207.0742.pdf

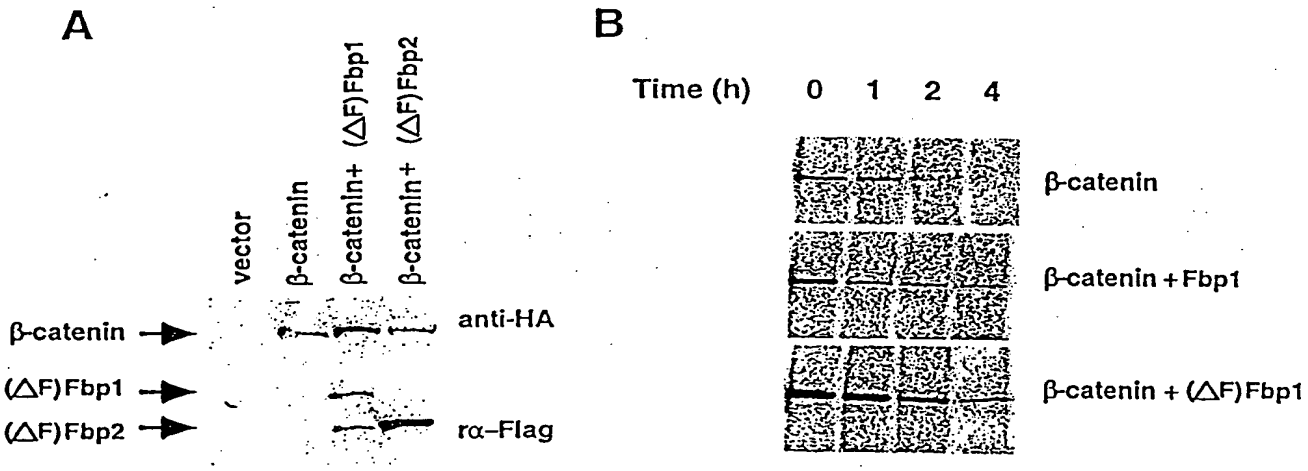
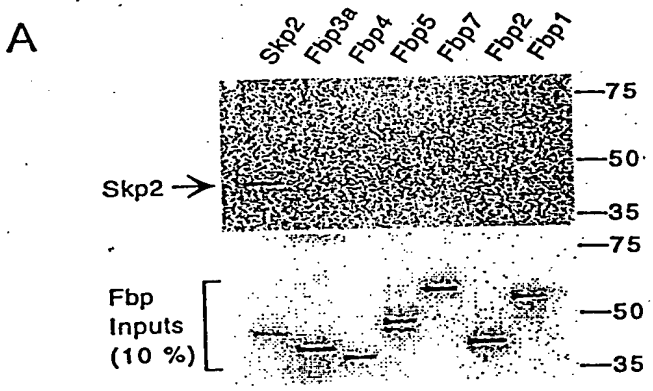
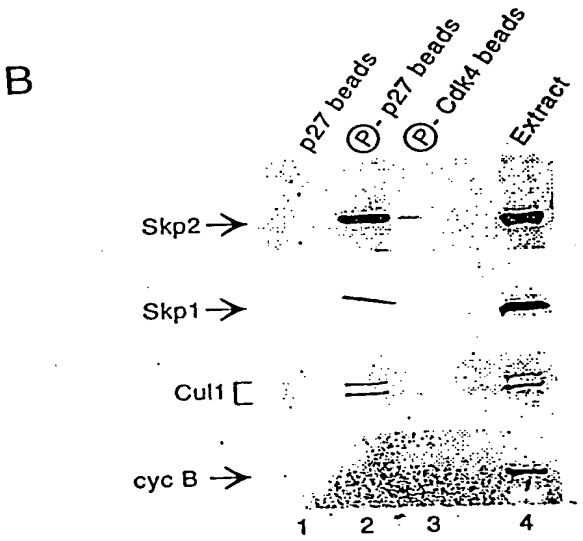


FIG. 36 A-B


A
Skp2
Fbp3a
Fbp4
Fbp5
Fbp7
Fbp2
Fbp1
75
50
35
Skp2
75
Fbp
Inputs
(10 %)
50
35


B
p27 beads
Ⓟ- p27 beads
Ⓟ- Cdk4 beads
Extract
Skp2
Skp1
Cul1
cyc B
1
2
3
4

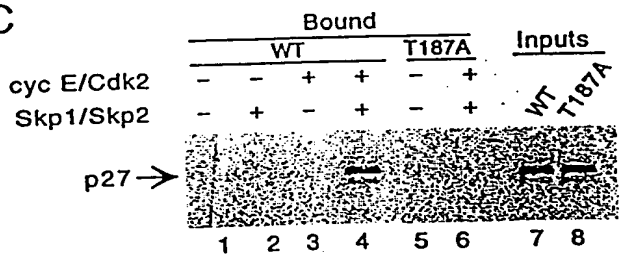

C
Bound
WT
T187A
Inputs
cyc E/Cdk2
Skp1/Skp2
WT
T187A
p27
1 2 3 4 5 6 7 8

FIG. 37 A-C

20704-0-2704-01

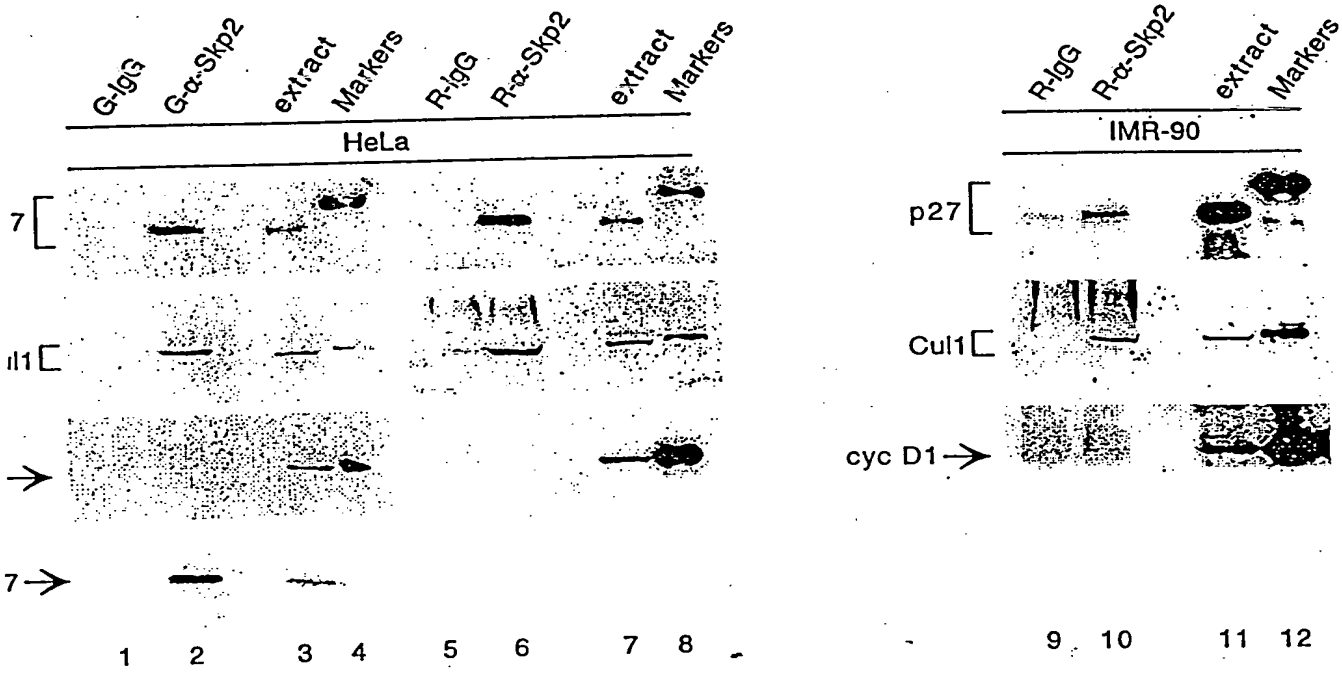


FIG. 38

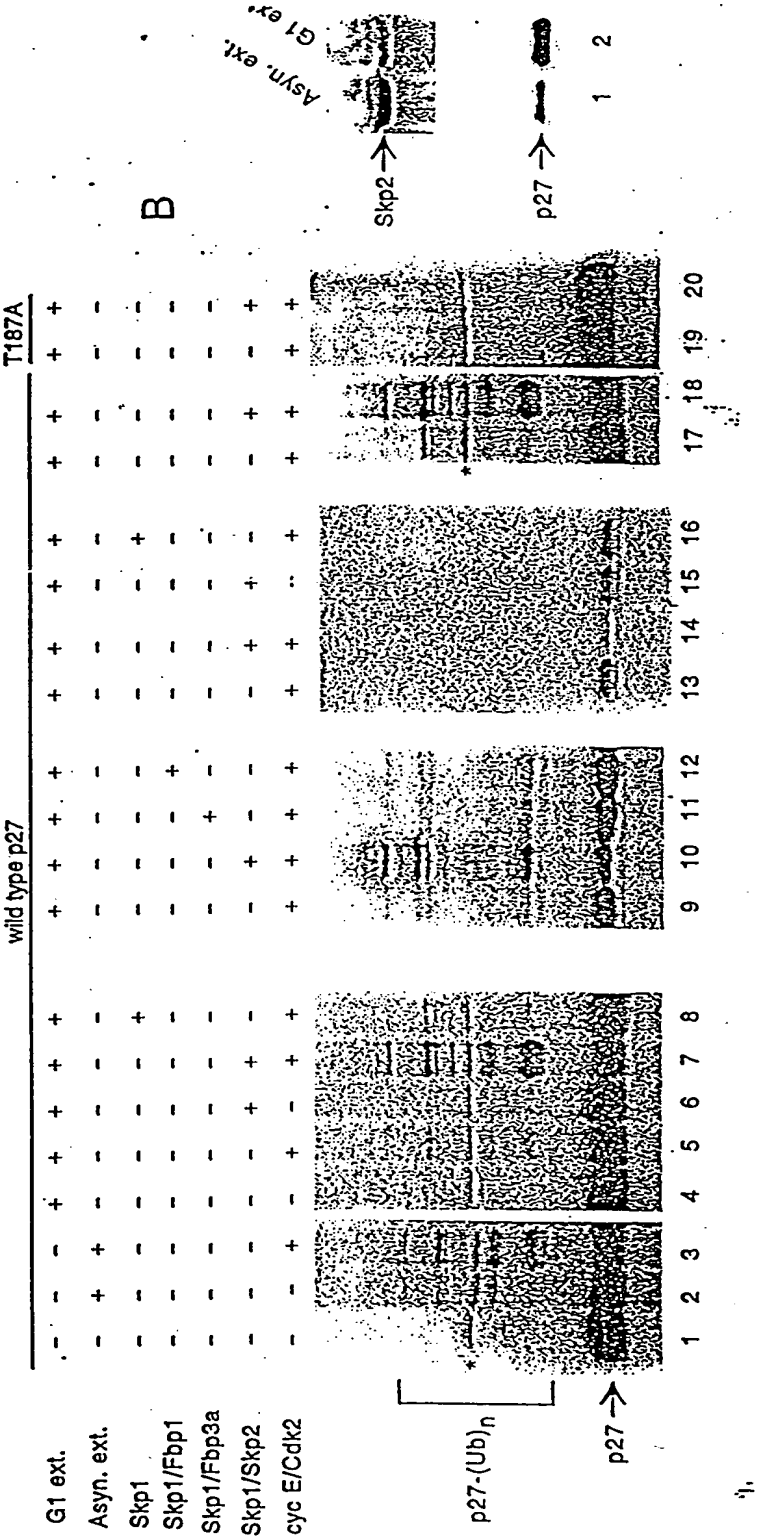

A
B
wild type p27
T187A
G1 ext.
Asyn. ext.
Skp1
Skp1/Fbp1
Skp1/Fbp3a
Skp1/Skp2
cyc E/Cdk2
p27-(Ub)n
p27
Asyn. ext.
G1 ex.
Skp2
p27
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
1 2

FIG. 39 A-B

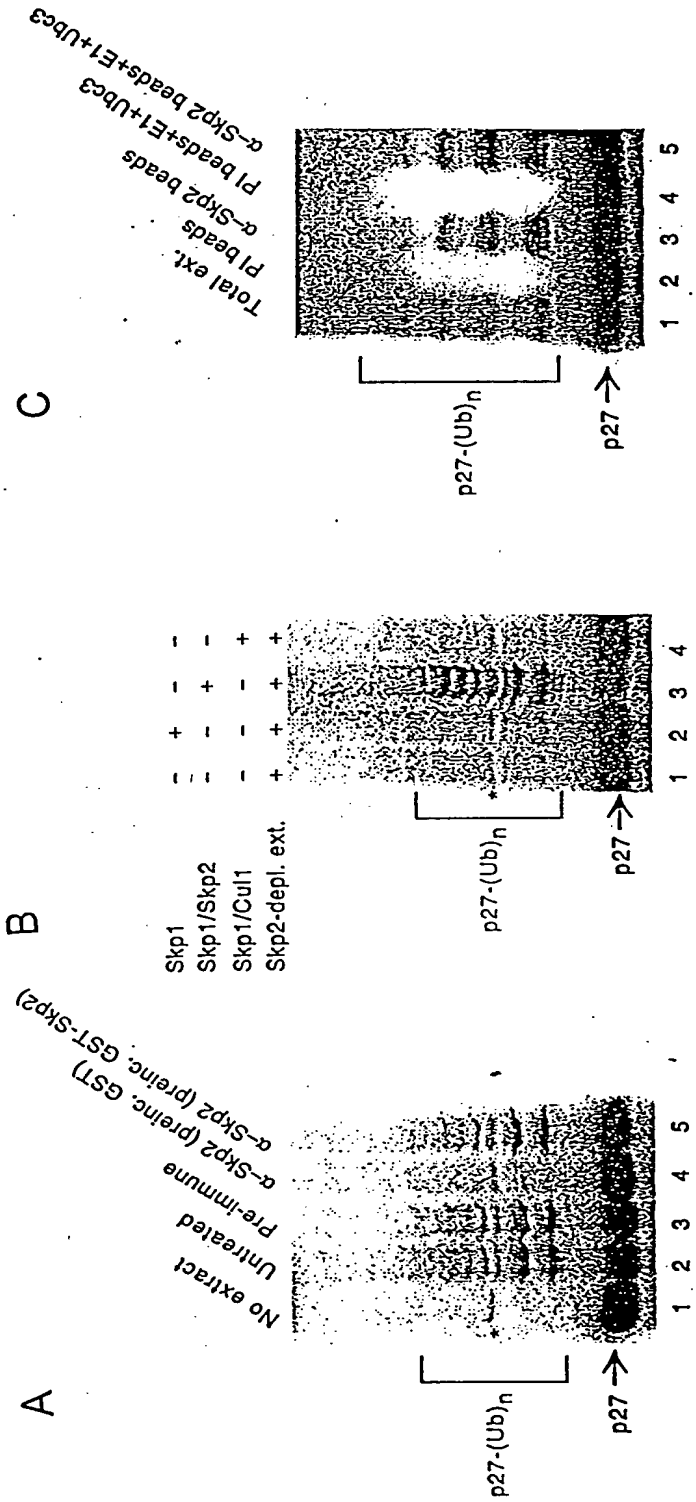
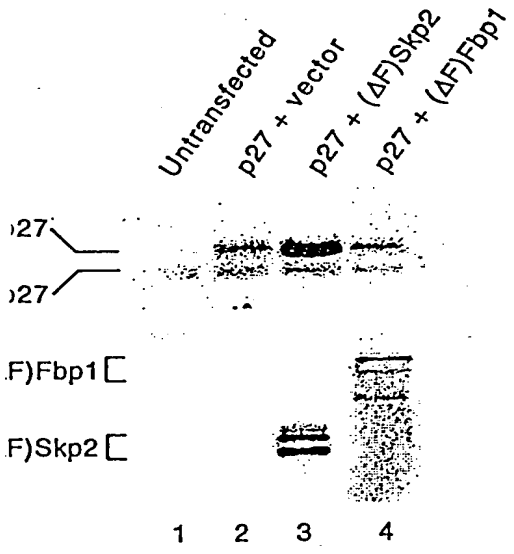


FIG. 40 A-C

20070047-0407

EP 0 942 074 A2



B

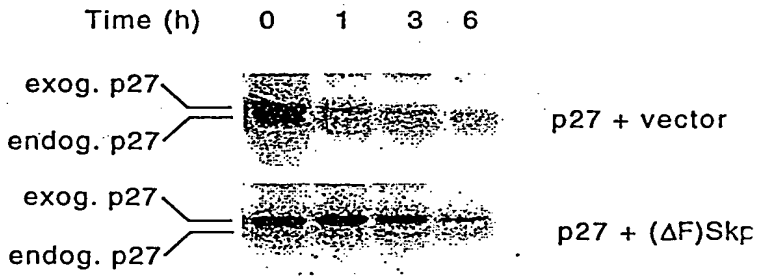


FIG. 41 A-B

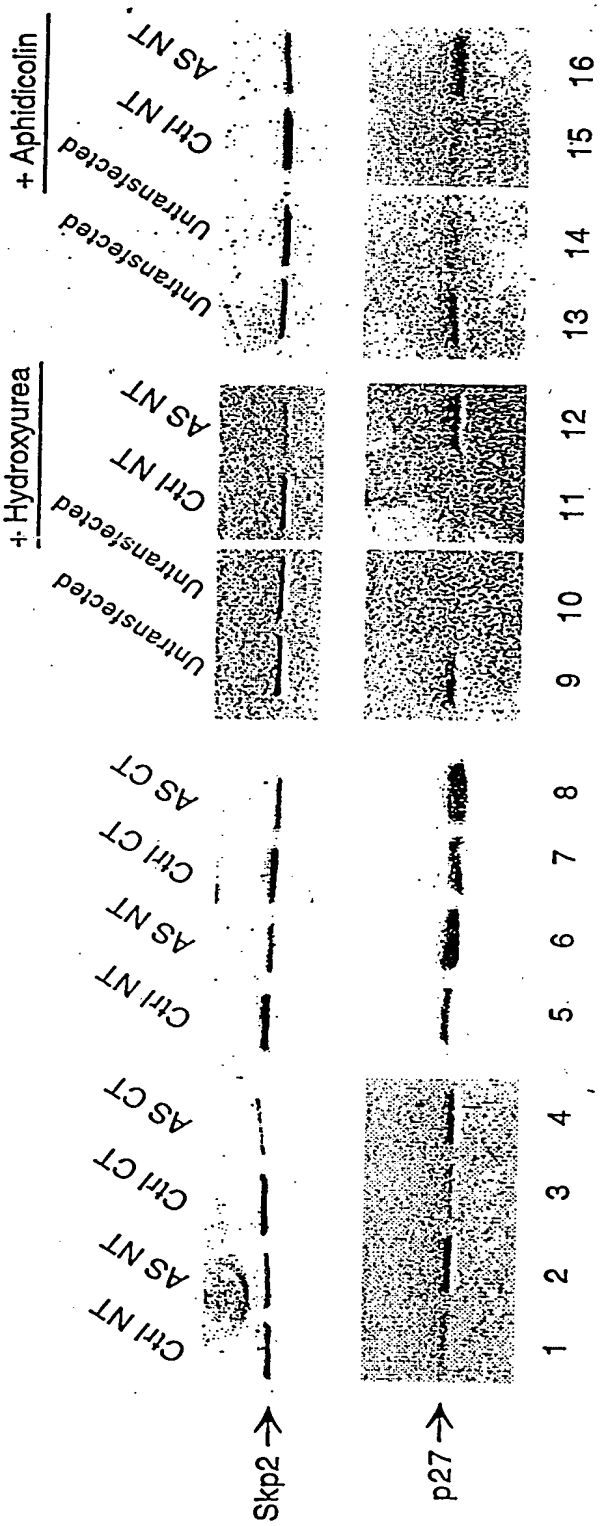


FIG. 42

20070427-04704007

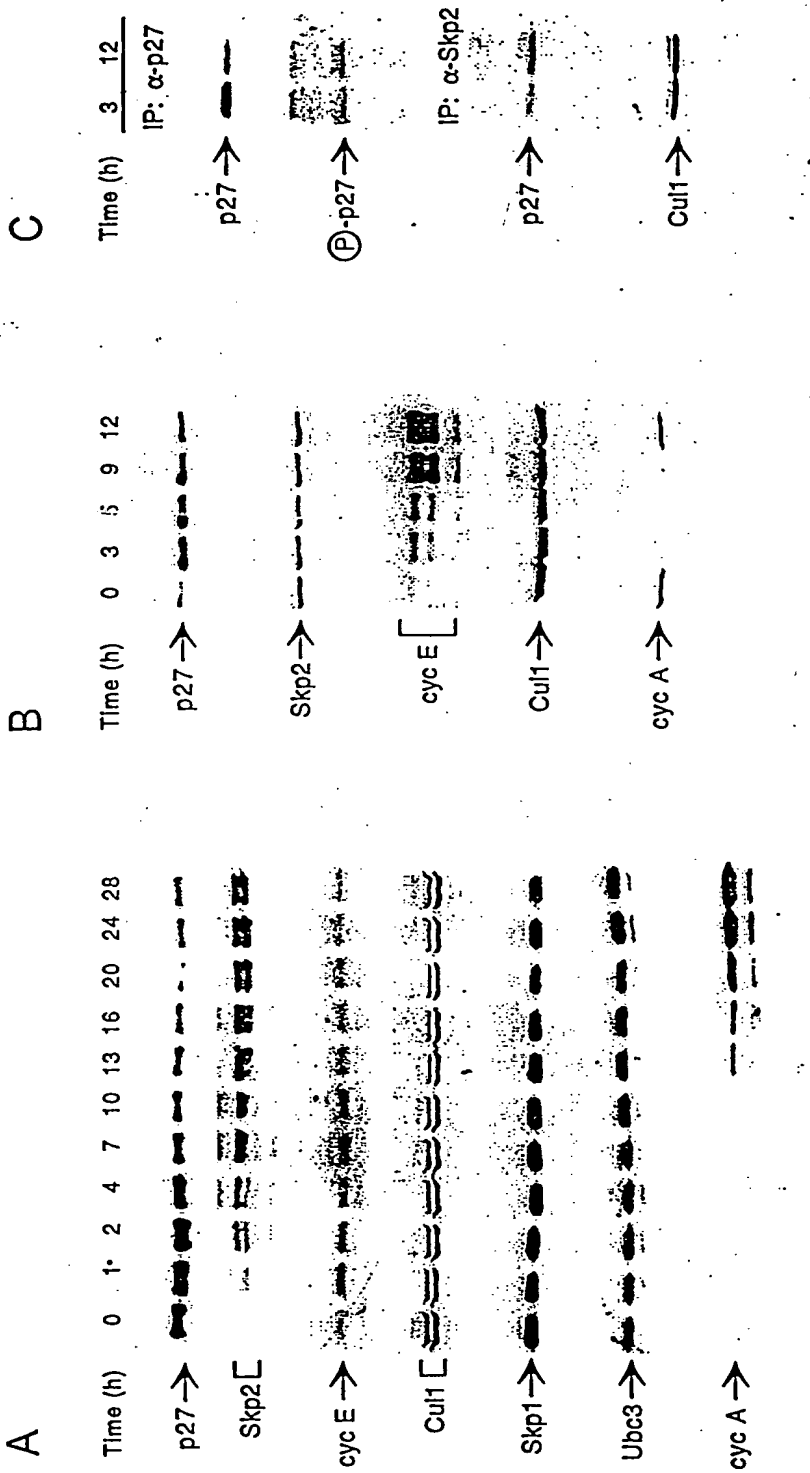

A
Time (h) 0 1 2 4 7 10 13 16 20 24 28
p27
Skp2
cyc E
Cul1
Skp1
Ubc3
cyc A
B
Time (h) 0 3 5 9 12
p27
Skp2
cyc E
Cul1
cyc A
C
Time (h) 3 12
IP: α-p27
p27
Ⓟ-p27
IP: α-Skp2
p27
Cul1
Skp1
1 2

FIG. 43 A-C

20070.0407.2742004

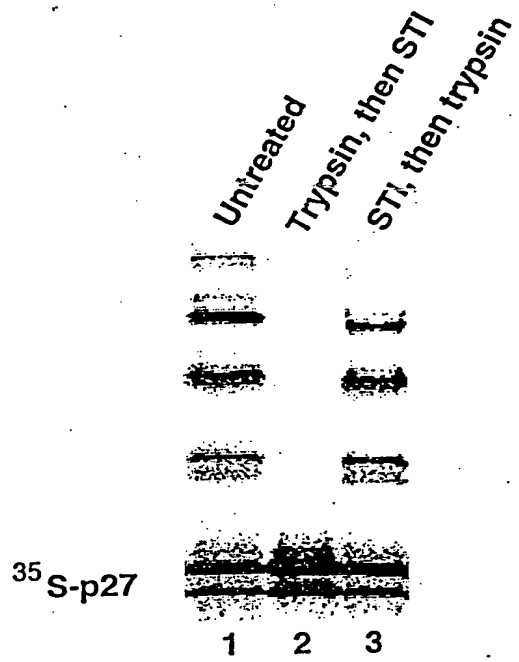


FIG. 44

20070510-7-24-2007

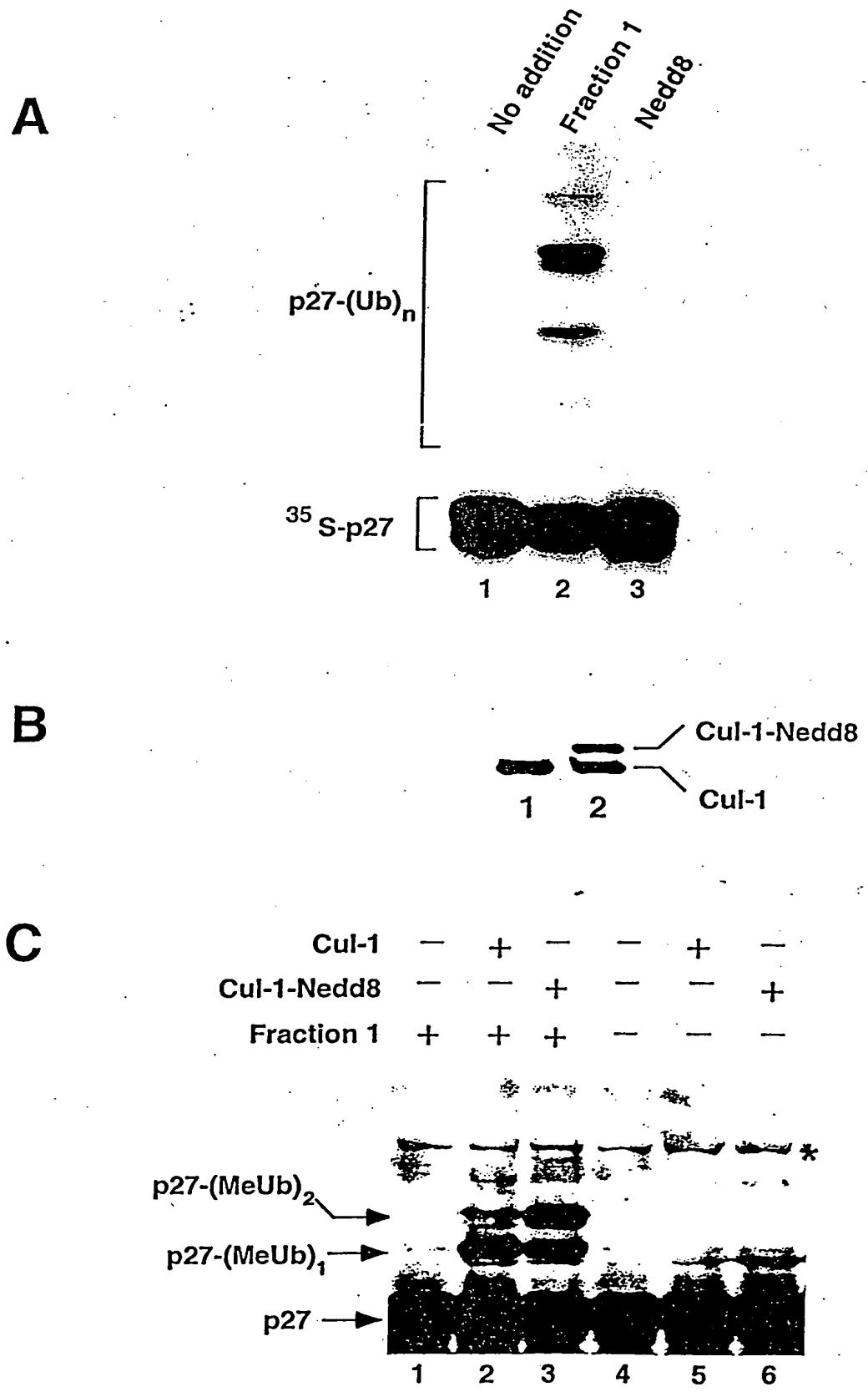
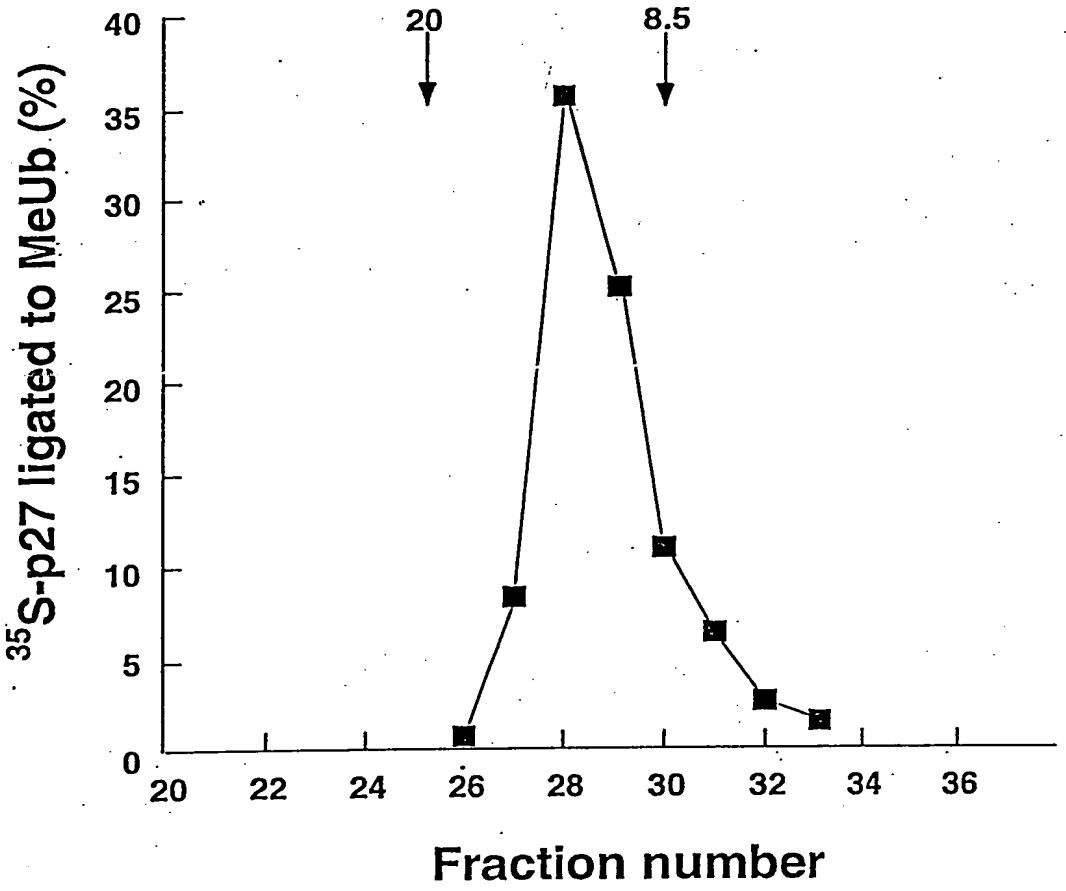


FIG. 45

20270P0 '27+24907

A.



B.

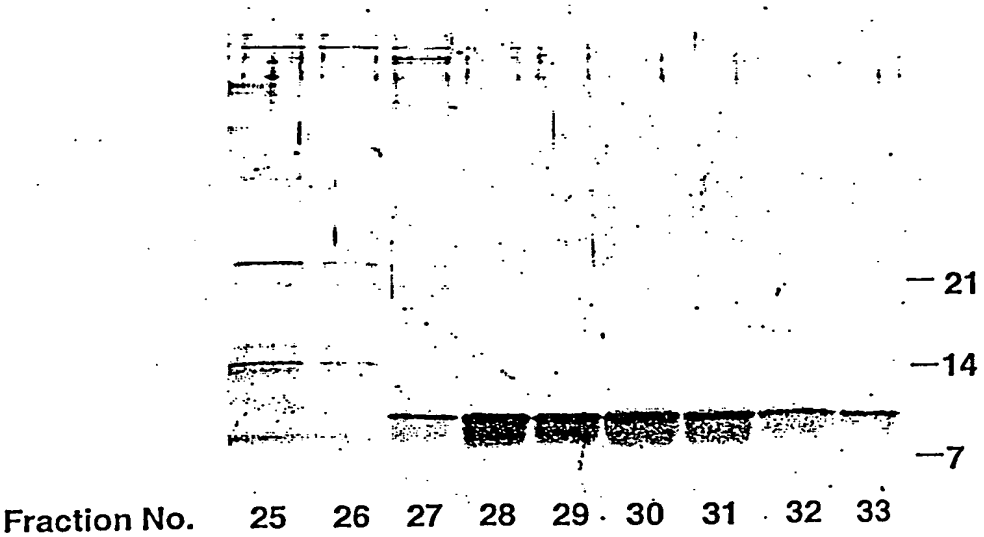


FIG. 46

10042427 - 010702

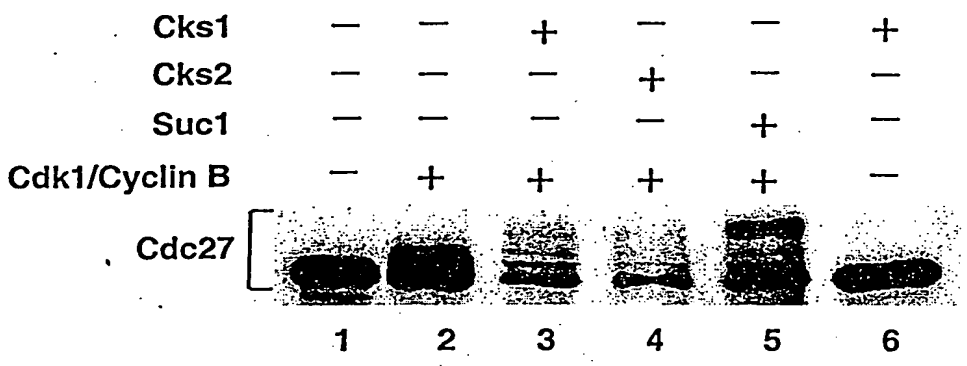


FIG. 47

20020042704A1

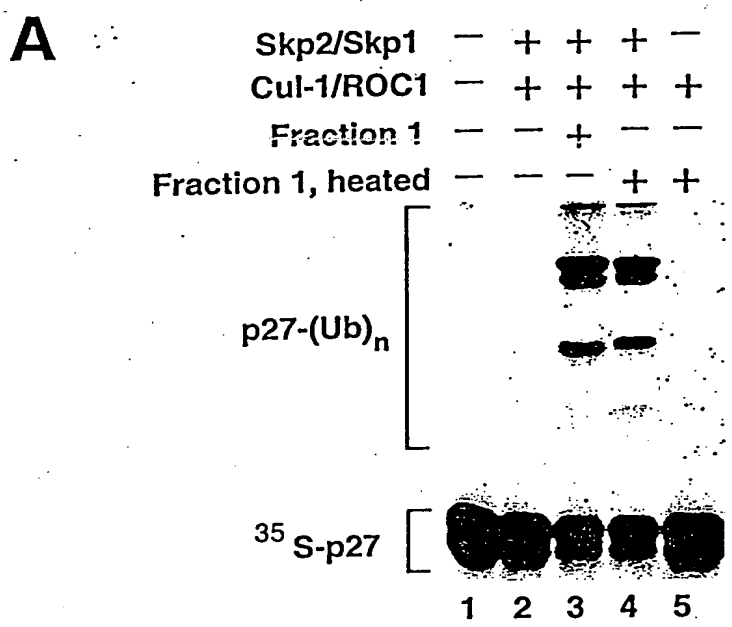


FIG. 48

20070047.1

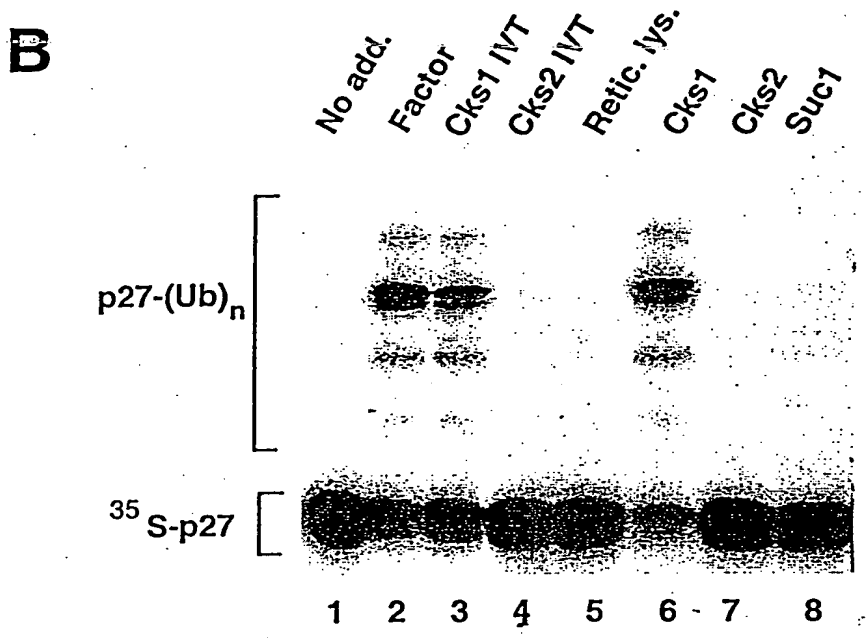


FIG. 48

20270 TO 27+2007

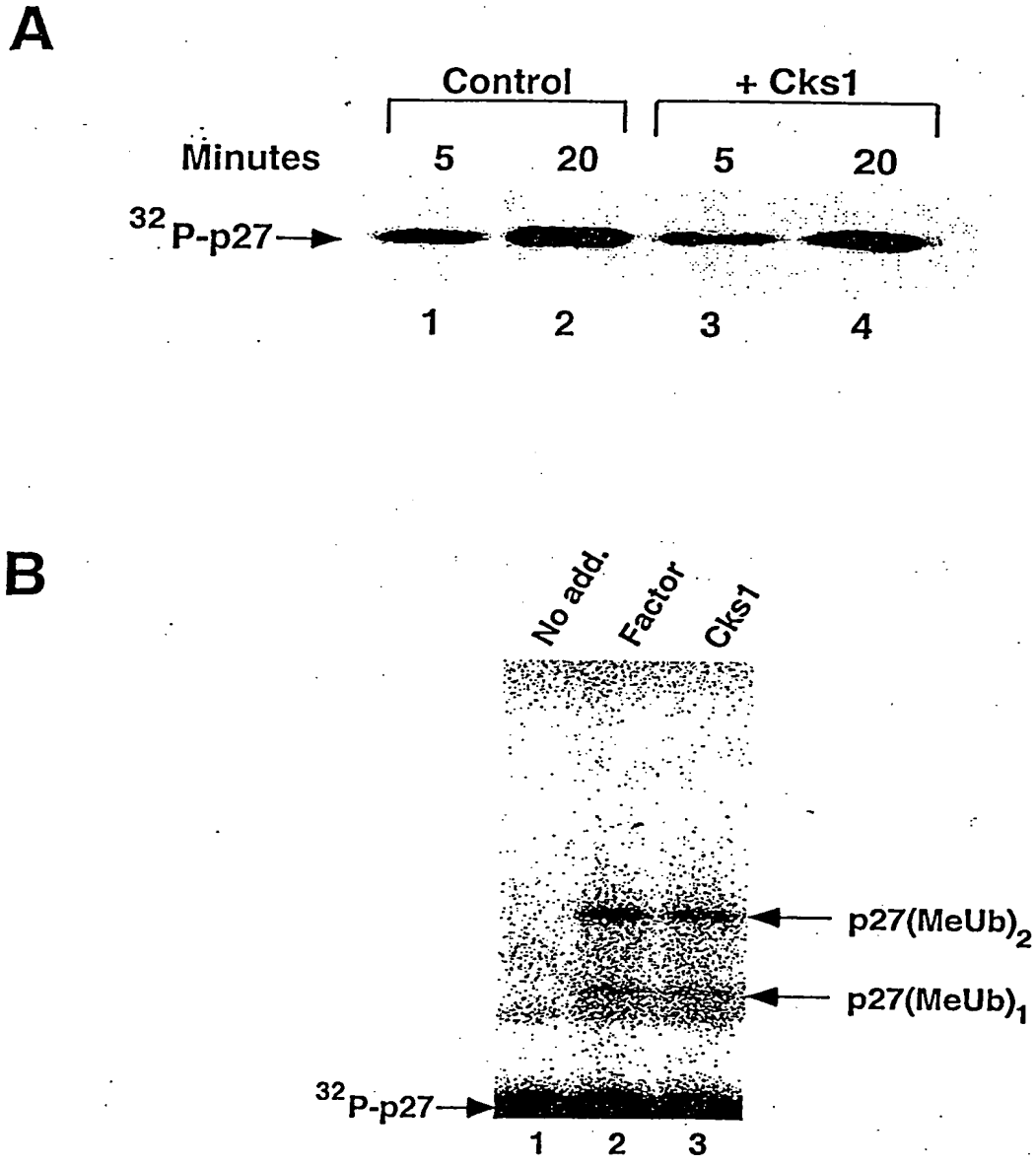
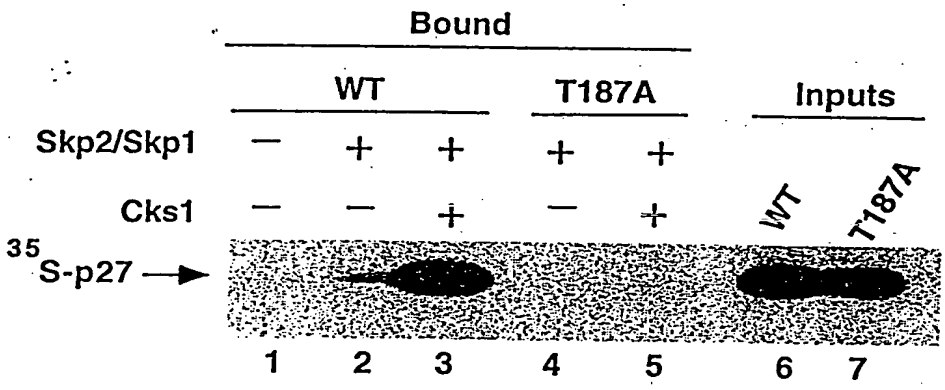


FIG. 49

20040147702 "04/07/2004

C



D

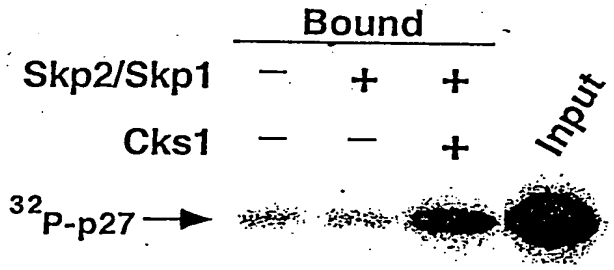


FIG. 49

20210107.174247.01

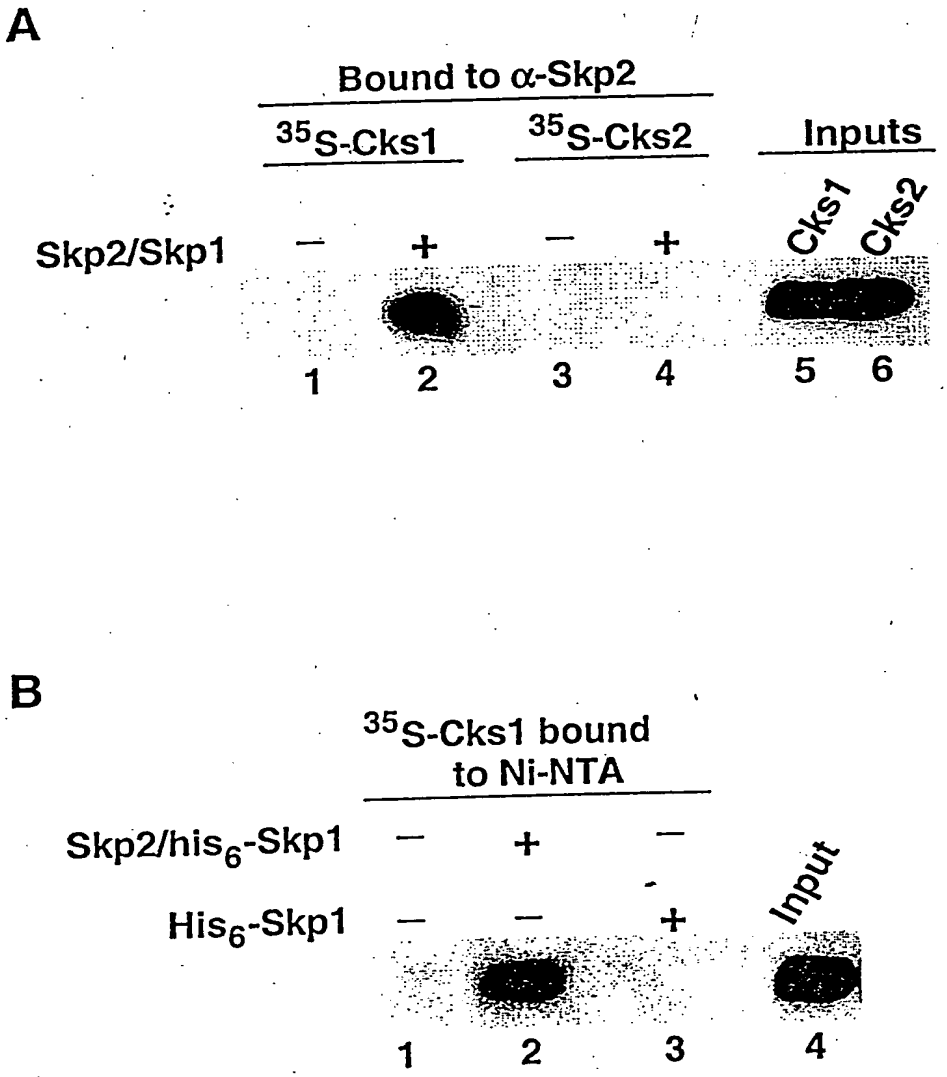
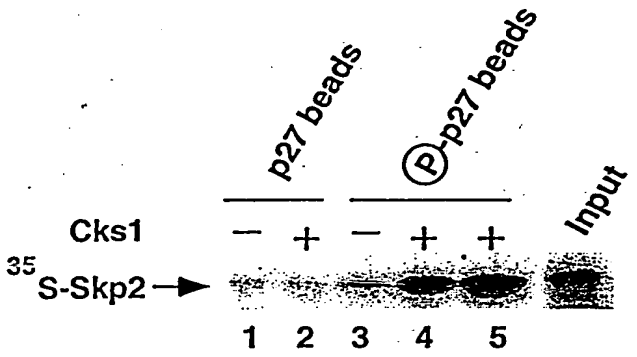


FIG. 5D

20070047447.pdf

C



D

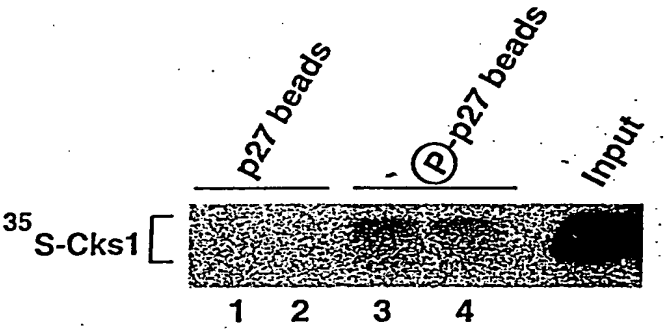


FIG. 5D

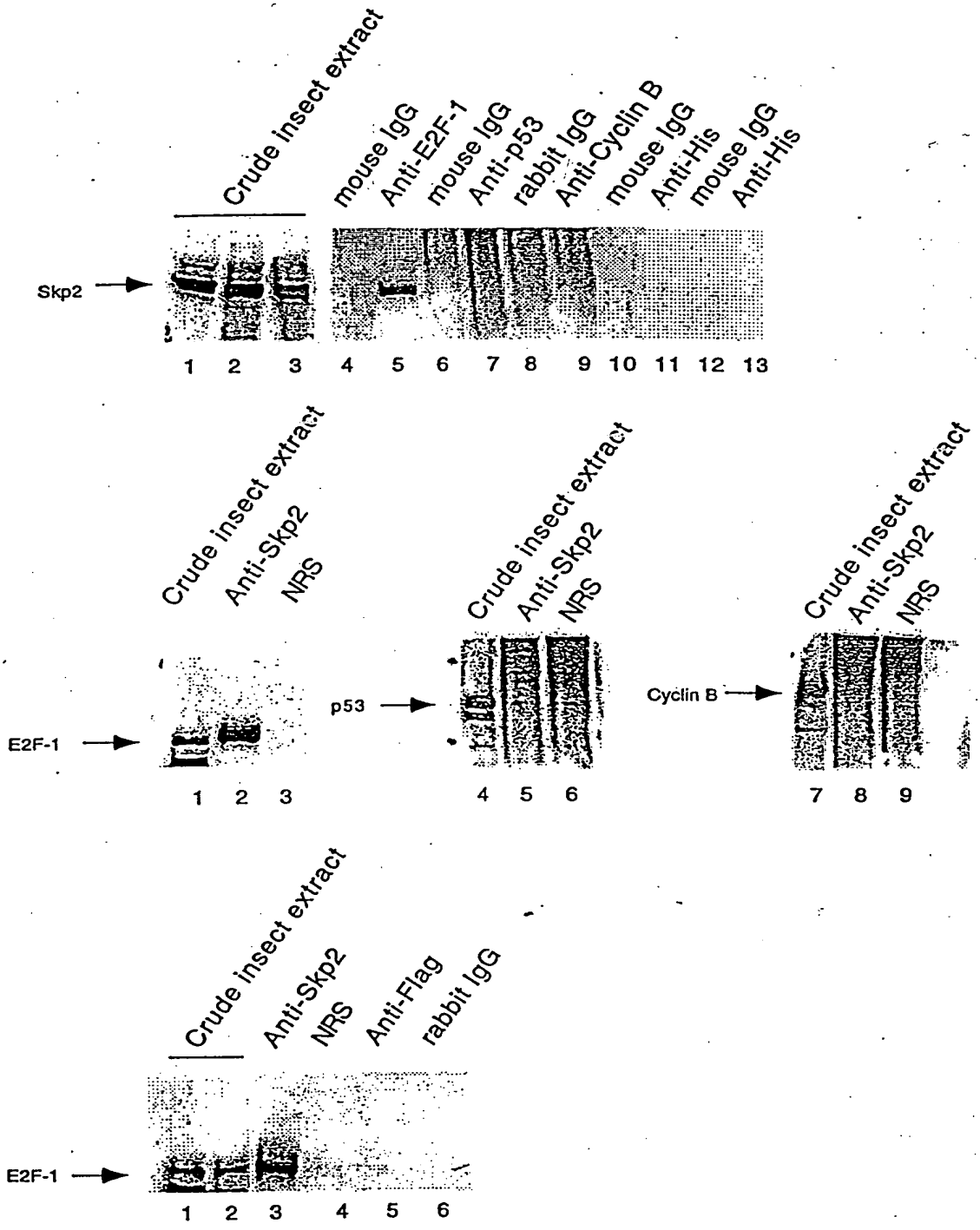

A
Crude insect extract
mouse IgG
Anti-E2F-1
mouse IgG
Anti-p53
rabbit IgG
Anti-Cyclin B
mouse IgG
Anti-His
mouse IgG
Anti-His
Skp2
1 2 3 4 5 6 7 8 9 10 11 12 13
B
Crude insect extract
Anti-Skp2
NRS
E2F-1
p53
Cyclin B
1 2 3 4 5 6 7 8 9
C
Crude insect extract
Anti-Skp2
NRS
Anti-Flag
rabbit IgG
E2F-1
1 2 3 4 5 6

FIG. 51 A-C